

6181X PVC SINGLE CORE, NON ARMoured MAINS CABLE



APPLICATION

6181X is a PVC single core cable, It is double insulated with a voltage rating of 600/1000V. It is a general surface wire cable for fixed installation, domestic and light industrial use. Brown core with black outer. Available in sizes from 50mm²–1000mm².

CABLE STANDARDS

BS7889-12

Flame propagation to BS EN 50265 (IEC 60332)

CONSTRUCTION

Conductor: 1mm – 2.5mm solid conductor
Above 2.5mm - Plain annealed stranded circular copper conductor, single core

Insulation: Cross linked Polyethylene (XPLE) available in Brown

Sheath: PVC

Sheath Colour: Black

CHARACTERISTICS

Voltage Rating:

50mm² – 630mm²: 600/1000 Volts

Temperature Limits: -15°C to +90°C

Minimum Bending Radius: As per cable manufacturer datasheet

CORE IDENTIFICATION

All sizes available in ■ Brown

Should not be installed at temperatures below 0°C or above +60°C

6181X PVC SINGLE CORE, NON ARMoured CABLE - DIMENSIONS

CCC CODE	CONDUCTOR SIZE (MM ²)	STRANDING (MM)	WEIGHT (KG/KM)	OUTSIDE DIAMETER (MM)	BRASS A2	NYLON A2	NYLON CLEAT SIZE	TREFOIL CLEAT
6181X50	50	19/1.78	520	13.5	25	25	0.6	
6181X70	70	19/2.14	720	15.5	25	25	0.7	
6181X95	95	19/2.52	985	17.5	25	25	0.7	
6181X120	120	37/2.03	1215	19	32	32	0.8	
6181X150	150	37/2.25	1515	21.5	32	32	0.9	
6181X185	185	37/2.52	1865	23.5	32	32	1	
6181X240	240	61/2.25	2415	26.5	40	40	1.1	
6181X300	300	61/2.52	3005	29	40	40	1.2	TASB04
6181X400	400	61/2.85	3810	32.5	50S	50	1.4	TASB06
6181X500	500	61/3.20	4890	37	50S	50	1.6	TASB09
6181X630	630	127/2.52	6355	42	50	63	1.8	TASB12
6181X800	800	127/2.85	8075	46	63S	-	2	TASB15
6181X1000	1000	127/3.20	9860	53	63	-	TC9	TASB19

6181X PVC – CARRYING CAPACITY (AMPERES)

CONDUCTOR CROSS – SECTIONAL AREA	REFERENCE METHOD A (ENCLOSED IN CONDUIT 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 ON A PERFORATED CABLE TRAY HORIZONTAL \ VERTICAL)				
	2 CABLES, SINGLE - PHASE AC OR DC	3 OR 4 CABLES, 3 PHASE AC	2 CABLES, SINGLE - PHASE AC OR DC	3 OR 4 CABLES, THREE PHASE AC OR DC	2 CABLES, SINGLE - PHASE AC OR DC FLAT AND TOUCHING	3 OR 4 CABLES, THREE PHASE AC FLAT AND TOUCHING OR TREFOIL	TOUCHING			SPACED BY ONE DIAMETER	
							2 CABLES, SINGLE - PHASE AC OR DC FLAT	3 CABLES, THREE - PHASE AC FLAT	3 CABLES, THREE - PHASE AC TREFOIL	2 CABLES, SINGLE PHASE AC OR DC OR 3 CABLES THREE-PHASE AC FLAT	HORIZONTAL
1	2	3	4	5	6	7	8	9	10	11	12
(MM ²)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)
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	264	341	311
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	1,085	1,008
500	-	-	783	666	990	904	1,083	998	946	1,253	1,169
630	-	-	900	764	1,130	1,033	1,254	1,151	1,088	1,454	1,362
800	-	-	-	-	1,288	1,179	1,358	1,275	1,214	1,581	1,485
1,000	-	-	-	-	1,443	1,323	1,520	1,436	1,349	1,775	1,671

THE ABOVE IS IN ACCORDANCE WITH 18TH EDITION OF IET WIRING REGULATIONS

6181X PVC – CARRYING CAPACITY (AMPERES)

CONDUCTOR CROSS-SECTIONAL AREA	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	2	3			4			5			6			7			8			9		
(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)		
		R	X	Z	R	X	Z	R	X	Z	R	X	Z	R	X	Z	R	X	Z	R	X	Z
50	0.930	0.950	0.300	1.000	0.930	0.190	0.950	0.930	0.280	0.970	0.81	0.260	0.850	0.800	0.170	0.820	0.800	0.24	0.840	0.800	0.320	0.860
70	0.630	0.650	0.290	0.720	0.630	0.185	0.660	0.630	0.270	0.690	0.560	0.250	0.61	0.550	0.160	0.57	0.550	0.24	0.600	0.550	0.31	0.630
95	0.460	0.490	0.280	0.560	0.47	0.180	0.500	0.47	0.270	0.540	0.420	0.24	0.480	0.41	0.160	0.430	0.41	0.230	0.47	0.400	0.31	0.51
120	0.360	0.390	0.270	0.47	0.370	0.180	0.410	0.370	0.260	0.450	0.330	0.230	0.41	0.320	0.150	0.360	0.320	0.230	0.400	0.320	0.300	0.440
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	0.14	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	0.3	0.25	0.25	0.36	0.23	0.23	0.32	0.22	0.14	0.26	0.22	0.165	0.28	0.22	0.24	0.33
240	0.19	0.21	0.26	0.33	0.2	0.16	0.25	0.195	0.25	0.31	0.185	0.22	0.29	0.17	0.14	0.22	0.17	0.165	0.24	0.17	0.24	0.29
300	0.155	0.175	0.25	0.31	0.16	0.16	0.22	0.155	0.25	0.29	0.15	0.22	0.27	0.14	0.14	0.195	0.135	0.16	0.21	0.135	0.24	0.27
400	0.12	0.14	0.25	0.29	0.13	0.155	0.2	0.125	0.24	0.27	0.125	0.22	0.25	0.11	0.135	0.175	0.11	0.16	0.195	0.11	0.24	0.26
500	0.093	0.12	0.25	0.28	0.105	0.155	0.185	0.098	0.24	0.26	0.1	0.22	0.24	0.09	0.135	0.16	0.088	0.16	0.18	0.085	0.24	0.25
630	0.072	0.1	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	0.15	0.071	0.16	0.17	0.068	0.23	0.24
800	0.056	-	-	-	0.072	0.15	0.17	0.064	0.24	0.25	-	-	-	0.062	0.13	0.145	0.059	0.155	0.165	0.055	0.23	0.24
1,000	0.045	-	-	-	0.063	0.15	0.165	0.054	0.24	0.24	-	-	-	0.055	0.13	0.14	0.05	0.155	0.165	0.047	0.23	0.24

THE ABOVE IS IN ACCORDANCE WITH 18TH EDITION OF IET WIRING REGULATIONS

CONDUCTOR OPERATING TEMPERATURE: 90°C

R = RESISTIVE COMPONENT
X = REACTIVE COMPONENT
Z = IMPEDANCE VALUE

* SPACINGS LARGER THAN THOSE SPECIFIED WILL RESULT IN LARGER VOLT DROP

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