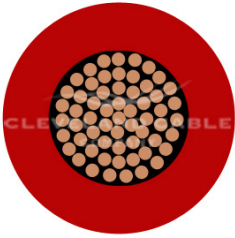


6181X PVC SINGLE CORE, NON ARMoured CATHODE PROTECTION CABLE



APPLICATION

IEC 60502 6181X is a single core non-armoured cathodic protection PVC cable, used for protection against corrosion in cathodic systems where the risk of mechanical damage is minimal.

CABLE STANDARDS

IEC 60502

CONSTRUCTION

Conductor: Plain annealed stranded circular copper conductor, single core

Insulation: Cross linked Polyethylene (XPLE)

Sheath: PVC

CHARACTERISTICS

Voltage Rating: 600/1000 Volts

Temperature Limits: -15°C to +90°C

Minimum Bending Radius: As per cable manufacturer datasheet

Inner and outer available in:

■ Red ■ Black ■ Blue ■ Yellow

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

6181X PVC NON ARMoured CATHODE PROTECTION - DIMENSIONS

CCC CODE	CONDUCTOR SIZE (MM ²)	STRANDING (MM)	WEIGHT (KG/KM)	OVERALL DIAMETER (MM)	GLAND SIZE
6181X6	6	7/1.04	105	7.2	20/16
6181X10	10	7/1.35	150	8.1	20/16
6181X16	16	7/1.70	10	9	20S
6181X25	25	7/2.14	305	10.6	20S
6181X35	35	7/2.52	395	11.6	20
6181X50	50	19/1.78	515	13	20
6181X70	70	19/2.14	725	14.9	25
6181X95	95	19/2.52	1230	17.5	25
6181X120	120	37/2.03	1355	19.2	32
6181X150	150	37/2.25	1695	21.3	32
6181X185	185	37/2.52	2110	23.4	32

6181X PVC CATHODE PROTECTION – 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 OR VERTICAL)				
	2 CABLES, SINGLE - PHASE AC OR DC	3 OR 4 CABLES, SINGLE - PHASE AC	2 CABLES, SINGLE - PHASE AC OR DC	3 OR 4 CABLES, THREE PHASE AC	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	HORIZONTAL	VERTICAL
(MM ²)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)
6	45	40	54	48	59	54	-	-	-	-	-
10	61	54	75	66	81	74	-	-	-	-	-
16	81	73	100	88	109	99	-	-	-	-	-
25	106	95	133	117	143	130	161	141	135	182	161
35	131	117	164	144	176	161	200	176	169	226	201
50	158	141	198	175	228	209	242	216	207	275	246
70	200	179	253	222	293	268	310	279	268	353	318
95	241	216	306	269	355	326	377	342	328	430	389
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

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

6181X PVC UNARMoured CATHODE PROTECTION - VOLTAGE DROP

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	2	3			4			5			6			7			8			9					
(MM ²)	(mV/A/m)	(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)					
6	7.9	7.9			7.9			7.9			6.8			6.8			6.8			6.8					
10	4.7	4.7			4.7			4.7			4			4			4			4					
16	2.9	2.9			2.9			2.9			2.5			2.5			2.5			2.5					
		R	X	Z	R	X	Z	R	X	Z	R	X	Z	R	X	Z	R	X	Z	R	X	Z	R	X	Z
25	1.85	1.85	0.31	1.90	1.85	0.19	1.85	1.85	0.28	1.85	1.60	0.27	1.65	1.60	0.165	1.60	1.60	0.19	1.60	1.60	0.27	1.65			
35	1.35	1.35	0.29	1.35	1.35	0.18	1.35	1.35	0.27	1.35	1.15	0.25	1.15	1.15	0.155	1.15	1.15	0.18	1.15	1.15	0.26	1.20			
50	0.99	1.00	0.29	1.05	0.99	0.18	1.00	0.99	0.27	1.00	0.87	0.25	0.90	0.86	0.155	0.87	0.86	0.18	0.87	0.86	0.26	0.89			
70	0.68	0.70	0.28	0.75	0.68	0.175	0.71	0.68	0.26	0.73	0.60	0.24	0.65	0.59	0.15	0.61	0.59	0.175	0.62	0.59	0.25	0.65			
95	0.49	0.51	0.27	0.58	0.49	0.17	0.52	0.49	0.26	0.56	0.44	0.23	0.50	0.43	0.145	0.45	0.43	0.17	0.46	0.43	0.25	0.49			
120	0.39	0.41	0.26	0.48	0.39	0.165	0.43	0.39	0.25	0.47	0.35	0.23	0.42	0.34	0.14	0.37	0.34	0.165	0.38	0.34	0.24	0.42			
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	0.30	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			

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 IN METHOD 12 WILL RESULT IN LARGER VOLT DROP.

THE INFORMATION CONTAINED WITHIN THIS DATASHEET IS FOR GUIDANCE ONLY AND IS SUBJECT TO CHANGE WITHOUT NOTICE OR LIABILITY. WE BELIEVE THE INFORMATION IS CORRECT AT THE TIME OF PUBLICATION. PLEASE NOTE WHEN SELECTING CABLE ACCESSORIES THAT ACTUAL CABLE DIMENSIONS MAY VARY DUE TO MANUFACTURING TOLERANCES.