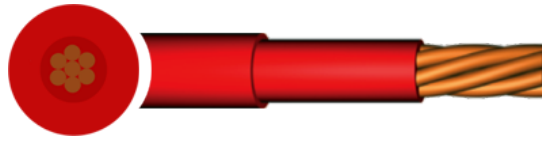


# 6181X Single Core Cathodic Protection Cable XLPE, Non Armoured, PVC - 6mm<sup>2</sup> to 185mm<sup>2</sup>



## Description

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.

## Key Features



**Voltage Rating**  
600/1000 Volts



**Minimum Bending Radius**  
8 x Overall Diameter



**Temperature Limits**  
Temperature Range: -15°C to +90°C

## Core Colours

Inner and outer available in:



## Standards

- BS EN/IEC 60502-1
- BS EN/IEC 60228

## Construction

- **Conductor:** Class 2 stranded copper conductor
- **Insulation:** Cross Linked polyethylene (XLPE)
- **Sheath:** PVC (Polyvinyl Chloride)

## QA Lab

### Cleveland Cable Test & Training Lab

Our state-of-the-art cable testing facility ensures that every cable meets the highest standards of quality and compliance through continuous, rigorous testing. Where applicable, cables are independently tested and certified by BASEC to ensure full compliance.



## CPR

Cleveland Cable Company is committed to compliance with the Construction Products Regulation (CPR). Where applicable, all cables manufactured after 1st July 2017 have been assessed in accordance with CPR requirements, with full supporting documentation available.



## Our Sustainability Commitment

We are committed to the journey to Net Zero as a business partner, an employer and a community member.

By thinking and acting sustainably, we deliver excellent customer service while reducing carbon emissions in collaboration with our customers and suppliers.



## ecovadis

Cleveland Cable Company has been independently assessed by EcoVadis, a globally recognised provider of business sustainability ratings. Our score places us among the top 35% of companies evaluated worldwide, reflecting our strong commitment to environmental, social, and ethical performance



## 6181X Single Core Cathodic Protection Cable XLPE, Non Armoured, PVC - 6mm<sup>2</sup> to 185mm<sup>2</sup> - Dimensions

Reference	Conductor Size (mm <sup>2</sup> )	No Of Cores	Stranding(mm)	Overall Diameter(mm)	Weight(Kg/Km)	Gland Size
6181X6	6	1	7/1.04	7.2	105	20/16
6181X10	10	1	7/1.35	8.1	150	20/16
6181X16	16	1	7/1.70	9	210	20S
6181X25	25	1	7/2.14	10.6	305	20S
6181X35	35	1	7/2.52	11.6	395	20
6181X50	50	1	19/1.78	520	1	20
6181X70	70	1	19/2.14	720	1	20
6181X95	95	1	19/2.52	985	1	20
6181X120	120	1	37/2.03	1215	1	20
6181X150	150	1	37/2.25	1515	1	20
6181X185	185	1	37/2.52	1865	1	25

TABLE 4E1A

CURRENT-CARRYING CAPACITY (amperes)

Ambient temperature: 30°C  
 Conductor operating temperature:90°C

Conductor cross sectional area	Reference Method A (enclosed in conduit in 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 or on a perforated cable tray etc. horizontal or vertical etc) Touching			Reference Method G (in free air) Spaced by one cable diameter		
	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 and touching	3 or 4 cables, three phase AC flat and touching or trefoil	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		
	A	A	A	A	A	A	A	A	A	Horizontal	Vertical	
mm <sup>2</sup>	A	A	A	A	A	A	A	A	A	A	A	A
1	14	13	17	15	19	17.5	-	-	-	-	-	-
1.5	19	17	23	20	25	23	-	-	-	-	-	-
4	35	31	42	37	46	41	-	-	-	-	-	-
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	
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	1085	1008	
500	-	-	783	666	990	904	1083	998	946	1253	1169	
630	-	-	900	764	1130	1033	1254	1151	1088	1454	1362	
800	-	-	-	-	1288	1179	1358	1275	1214	1581	1485	
1000	-	-	-	-	1443	1323	1520	1436	1349	1775	1671	

Where it is intended to connect the cables in this table to equipment or accessories designed to operate at a temperature lower than the maximum operating temperature of the cable, the cables should be rated at the maximum operating temperature of the equipment or accessory (see Regulation 512.1.5). Where it is intended to group a cable in this table with other cables, the cable should be rated at the lowest of the maximum operating temperatures of any of the cables in the group (see Regulation 12.1.5). For cables having flexible conductors see section 2.4 of this appendix for adjustment factors for current-carrying capacity and voltage drop.

TABLE 4E1B

VOLTAGE DROP (per ampere per metre)

Conductor operating temperature:90°C

Conductor cross sectional area (mm <sup>2</sup> )	2 cables, DC (mV/ A/m)	2 cables, single-phase AC									3 or 4 cables, three-phase AC														
		Reference Methods A & B (enclosed in conduit or trunking)			Reference Methods C, F & G (clipped direct, on tray or in free air)						Reference Methods A & B (enclosed in conduit or trunking)			Reference Methods C, F & G (clipped direct, on tray or in free air)											
					Cables touching			Cables spaced*						Cables touching, Trefoil			Cables touching, Flat			Cables spaced* Flat					
(mm <sup>2</sup> )	(mV/ A/m)	(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)			(mV/A/m)								
1	46	46			46			46			40			40			40			40					
1.5	31	31			31			31			27			27			27			27					
2.5	19	19			19			19			16			16			16			16					
4	12	12			12			12			10			10			10			10					
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			4.0			4.0			4.0			4.0					
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	1.850	1.850	0.310	1.900	1.850	0.190	1.850	1.850	0.280	1.850	1.600	0.270	1.650	1.600	0.165	1.600	1.600	0.190	1.600	1.600	0.270	1.650			
35	1.350	1.350	0.290	1.350	1.350	0.180	1.350	1.350	0.270	1.350	1.150	0.250	1.150	1.150	0.155	1.150	1.150	0.180	1.150	1.150	0.260	1.200			
50	0.990	1.000	0.290	1.050	0.990	0.180	1.000	0.990	0.270	1.000	0.870	0.250	0.900	0.860	0.155	0.870	0.860	0.180	0.870	0.860	0.260	0.890			
70	0.680	0.700	0.280	0.750	0.680	0.175	0.710	0.680	0.260	0.730	0.600	0.240	0.650	0.590	0.150	0.610	0.590	0.175	0.620	0.590	0.250	0.650			
95	0.490	0.510	0.270	0.580	0.490	0.170	0.520	0.490	0.260	0.560	0.440	0.230	0.500	0.430	0.145	0.450	0.430	0.170	0.460	0.430	0.250	0.490			
120	0.390	0.410	0.260	0.480	0.390	0.165	0.430	0.390	0.250	0.470	0.350	0.230	0.420	0.340	0.140	0.370	0.340	0.165	0.380	0.340	0.240	0.420			
150	0.320	0.330	0.260	0.430	0.320	0.165	0.360	0.320	0.250	0.410	0.290	0.230	0.370	0.280	0.140	0.310	0.280	0.165	0.320	0.280	0.240	0.370			
185	0.250	0.270	0.260	0.370	0.260	0.165	0.300	0.250	0.250	0.360	0.230	0.230	0.320	0.220	0.140	0.260	0.220	0.165	0.280	0.220	0.240	0.330			
240	0.190	0.210	0.260	0.330	0.200	0.160	0.250	0.195	0.250	0.310	0.185	0.220	0.290	0.170	0.140	0.220	0.170	0.165	0.240	0.170	0.240	0.290			
300	0.155	0.175	0.250	0.310	0.160	0.160	0.220	0.155	0.250	0.290	0.150	0.220	0.270	0.140	0.140	0.195	0.135	0.160	0.210	0.135	0.240	0.270			
400	0.120	0.140	0.250	0.290	0.130	0.155	0.200	0.125	0.240	0.270	0.125	0.220	0.250	0.110	0.135	0.175	0.110	0.160	0.195	0.110	0.240	0.260			
500	0.093	0.120	0.250	0.280	0.105	0.155	0.185	0.098	0.240	0.260	0.100	0.220	0.240	0.090	0.135	0.160	0.088	0.160	0.180	0.085	0.240	0.250			
630	0.072	0.100	0.250	0.270	0.086	0.155	0.175	0.078	0.240	0.250	0.088	0.210	0.230	0.074	0.135	0.150	0.071	0.160	0.170	0.068	0.230	0.240			
800	0.056	-	-	-	0.072	0.150	0.170	0.064	0.240	0.250	-	-	-	0.062	0.130	0.145	0.059	0.155	0.165	0.055	0.230	0.240			
1000	0.045	-	-	-	0.063	0.150	0.165	0.054	0.240	0.240	-	-	-	0.055	0.130	0.140	0.050	0.155	0.165	0.047	0.230	0.240			

NOTE: \* Spacings larger than one cable diameter will result in a larger voltage drop.

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