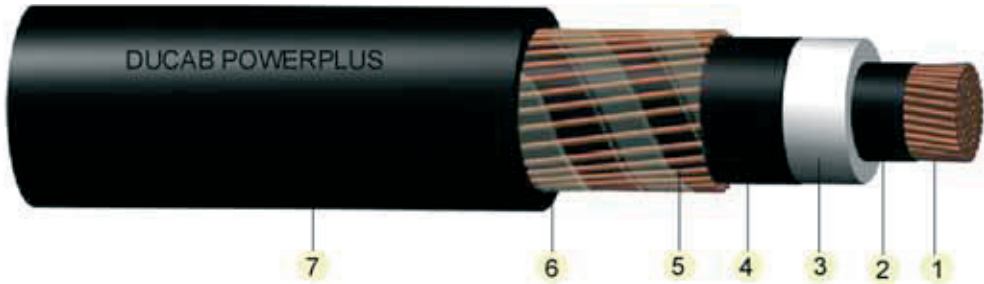


Table 21

Nominal Area of Conductor	mm ²	50	70	95	120	150	185	240	300	400	500	630	800	1000
Conductor Diameter (Max)	mm	8.4	9.9	11.6	13	14.5	16.1	18.4	20.6	23.7	26.6	29.8	33.6	37.6
Weight of Conductor (Approx)	Kg/Km	420	605	839	1056	1297	1629	2141	2686	3421	4335	5585	7346	9160
Insulation Thickness (Nominal)	mm	8	8	8	8	8	8	8	8	8	8	8	8	8
Outersheath Thickness (Nominal)	mm	2	2	2.1	2.1	2.2	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9
Approximate Overall Diameter	mm	32.0	33.5	35.0	36.5	38.5	40.0	42.5	45.0	48.0	51.0	54.5	58.5	63.0
Approximate Cable Weight	Kg/Km	1410	1680	2030	2310	2690	3080	3730	4460	5380	6610	8170	9570	11520
Standard Drum Length	m	500	500	500	500	500	500	500	500	500	500	500	400	300
Minimum Bending Radius of Cable (during installation)	mm	632	664	700	730	762	796	846	892	958	1020	1088	1170	1254
Maximum DC resistance of Conductor at 20°C	ohm/Km	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.047	0.0366	0.0283	0.0221	0.0176
Approximate AC resistance of Conductor at 90°C	ohm/Km	0.494	0.342	0.247	0.196	0.159	0.127	0.098	0.079	0.063	0.050	0.041	0.039	0.029
Approximate Reactance at 50 Hertz	ohm/Km	0.15	0.14	0.14	0.13	0.13	0.12	0.12	0.11	0.11	0.10	0.10	0.10	0.09
Approximate Impedance at 50 Hertz	ohm/Km	0.51	0.37	0.28	0.24	0.2	0.18	0.15	0.14	0.13	0.12	0.11	0.10	0.10
Approximate Capacitance of Cable	µf/Km	0.14	0.16	0.18	0.19	0.2	0.22	0.24	0.26	0.29	0.32	0.35	0.4	0.44
Approx. Charging Current per phase at Uo = 18kV and F = 50Hz	mA/m	0.79	0.9	1.0	1.1	1.1	1.2	1.4	1.5	1.6	1.8	2.0	2.3	2.5
Sustained Current Ratings														
1. Laid Direct, Ground Temp. 30°C & g =1.2°C m/W, depth of laying = 0.8m, laid in trefoil touching	A	196	240	285	320	365	409	472	534	614	676	757	828	899
2. Drawn into Ducts, Ground Temp. 30°C & g =1.2°C m/W, depth of laying = 0.8m, laid singly	A	200	240	285	320	360	396	463	507	561	623	694	757	819
3. Laid in Air in trefoil touching, Ambient Temp. 35° C	A	225	276	331	391	446	506	598	681	782	902	1040	1187	1316
One Second Short Circuit Current Rating of Conductor	kA	7.15	10.01	13.60	17.20	21.50	26.50	34.30	42.90	57.20	71.50	90.10	115	143

FOR ALL CABLES THE MAXIMUM CONDUCTOR OPERATING TEMPERATURE IS 90°C AND LIMITING CONDUCTOR TEMPERATURE AFTER SHORT CIRCUIT IS 250°C.
LONGER DRUM LENGTHS ARE AVAILABLE TO SPECIFIC CUSTOMER REQUIREMENTS.

18/30 (36)kV
Single Core
Copper Conductors
XLPE Insulated
to IEC 60502-2
Unarmoured



- 1.HCC⁺™ Copper Conductor
- 2.Semiconductive conductor screen
- 3.DFITM™ XLPE Insulation
- 4.Semiconductive insulation screen
- 5.Copper wire screen
- 6. Tape binder
- 7. Outer sheath

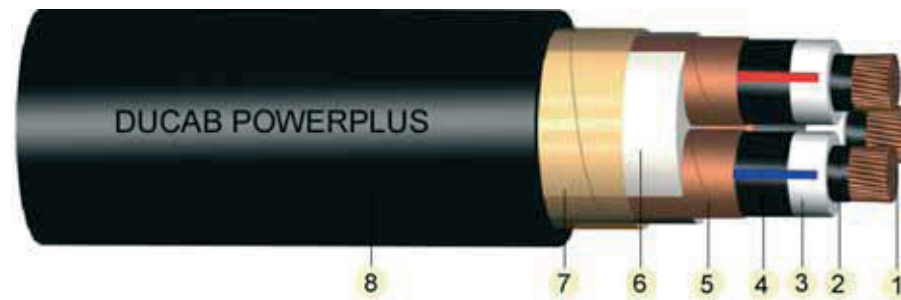
Table 22

Nominal Area of Conductor	mm ²	50	70	95	120	150	185	240	300	400
Conductor Diameter (Max)	mm	8.4	9.9	11.6	13	14.5	16.1	18.4	20.6	23.7
Weight of Conductor (Approx)	Kg/Km	1281	1845	2558	3219	3954	4966	6526	8187	10428
Insulation Thickness (Nominal)	mm	8	8	8	8	8	8	8	8	8
Outersheath Thickness (Nominal)	mm	3.1	3.2	3.3	3.4	3.5	3.6	3.8	3.9	4.2
Approximate Overall Diameter	mm	66.0	69.5	73.5	77.0	80.5	84.0	89.5	94.5	101.5
Approximate Cable Weight	Kg/Km	5380	6410	7590	8650	9760	11210	13530	15930	17370
Standard Drum Length	m	500	500	500	500	500	500	250	200	200
Minimum Bending Radius of Cable (during installation)	mm	1320	1390	1468	1532	1602	1676	1782	1882	2026
Maximum DC resistance of Conductor at 20°C	ohm/Km	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.047
Approximate AC resistance of Conductor at 90°C	ohm/Km	0.493	0.342	0.247	0.196	0.159	0.127	0.098	0.079	0.063
Approximate Reactance at 50 Hertz	ohm/Km	0.14	0.13	0.12	0.12	0.11	0.11	0.11	0.10	0.10
Approximate Impedance at 50 Hertz	ohm/Km	0.51	0.37	0.28	0.23	0.2	0.17	0.14	0.13	0.12
Approximate Capacitance of Cable	µf/Km	0.14	0.16	0.18	0.19	0.2	0.22	0.24	0.26	0.29
Approx. Charging Current per phase at U ₀ = 18kV and F = 50Hz	mA/m	0.79	0.90	1.0	1.1	1.1	1.2	1.4	1.5	1.6
Sustained Current Ratings										
1. Laid Direct, Ground Temp. 30°C & g = 1.2°C m/W, depth of laying = 0.8m, laid singly	A	198	241	283	321	358	406	462	510	566
2. Drawn into Ducts, Ground Temp. 30°C & g = 1.2°C m/W, depth of laying = 0.8m, laid singly	A	170	202	241	273	312	349	401	443	500
3. Laid singly in Air, Ambient Temp. 35° C	A	210	258	316	359	412	469	545	622	708
One Second Short Circuit Current Rating of Conductor	kA	7.15	10.01	13.60	17.20	21.50	26.50	34.30	42.90	57.20

FOR ALL CABLES THE MAXIMUM CONDUCTOR OPERATING TEMPERATURE IS 90°C AND LIMITING CONDUCTOR TEMPERATURE AFTER SHORT CIRCUIT IS 250°C.
LONGER DRUM LENGTHS ARE AVAILABLE TO SPECIFIC CUSTOMER REQUIREMENTS.

18/30 (36)kV

**Three Core
Copper Conductors
XLPE Insulated
to IEC 60502-2
Unarmoured**



- 1.HCC⁺™ Copper Conductor
- 2.Semiconductive conductor screen
- 3.DFI™ XLPE Insulation
- 4.Semiconductive insulation screen
- 5.Copper tape screen
6. Fillers
7. Tape binder
8. Outer sheath

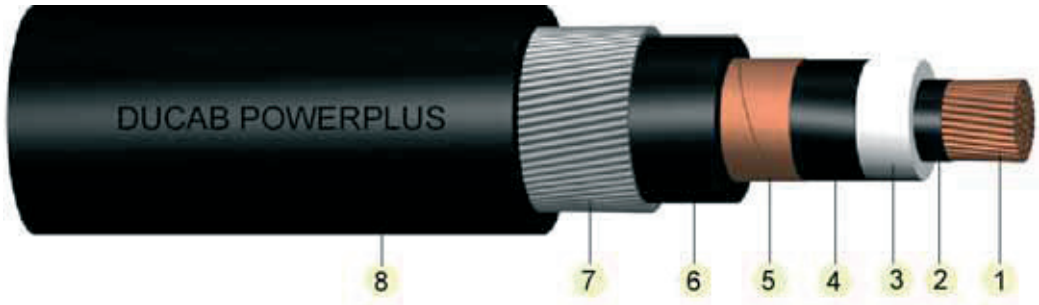
Table 23

Nominal Area of Conductor	mm ²	50	70	95	120	150	185	240	300	400	500	630	800	1000
Conductor Diameter (Max)	mm	8.4	9.9	11.6	13	14.5	16.1	18.4	20.6	23.7	26.6	29.8	33.6	37.6
Weight of Conductor (Approx)	Kg/Km	420	605	839	1056	1297	1629	2141	2686	3421	4335	5585	7346	9160
Insulation Thickness (Nominal)	mm	8	8	8	8	8	8	8	8	8	8	8	8	8
Separation Sheath Thickness	mm	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.4	1.5	1.6	1.6	1.7
Armour Wire Diameter (Nominal)	mm	2	2	2	2	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Outersheath Thickness (Nominal)	mm	2.2	2.2	2.3	2.3	2.4	2.5	2.6	2.6	2.7	2.85	2.9	3.1	3.2
Approximate Overall Diameter	mm	38.5	40.0	42.0	44.0	46.5	48.0	50.5	53.0	56.5	59.5	63.0	67.5	72.0
Approximate Cable Weight	Kg/Km	2030	2270	2640	3000	3500	3900	4600	5300	6400	7700	9150	11350	13750
Standard Drum Length	m	500	500	500	500	500	500	500	500	500	500	300	250	200
Minimum Bending Radius of Cable (during installation)	mm	576	599	627	651	692	719	756	792	845	893	945	1008	1076
Maximum DC resistance of Conductor at 20°C	ohm/Km	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.047	0.0366	0.0283	0.0221	0.0176
Approximate AC resistance of Conductor at 90°C	ohm/Km	0.494	0.342	0.247	0.196	0.159	0.128	0.098	0.079	0.063	0.050	0.041	0.039	0.029
Approximate Reactance at 50 Hertz	ohm/Km	0.16	0.15	0.14	0.14	0.13	0.13	0.12	0.12	0.11	0.11	0.11	0.09	0.09
Approximate Impedance at 50 Hertz	ohm/Km	0.52	0.37	0.28	0.24	0.21	0.18	0.16	0.14	0.13	0.12	0.11	0.10	0.09
Approximate Capacitance of Cable	µf/Km	0.14	0.16	0.18	0.19	0.2	0.22	0.24	0.26	0.29	0.32	0.35	0.4	0.44
Approx. Charging Current per phase at Uo = 18kV and F = 50Hz	mA/m	0.79	0.9	1.0	1.1	1.1	1.2	1.4	1.5	1.6	1.8	2.0	2.3	2.5
Sustained Current Ratings														
1. Laid Direct, Ground Temp. 30°C & g =1.2°C m/W, depth of laying = 0.8m, laid in trefoil touching	A	196	240	285	320	365	401	454	507	570	623	676	721	765
2. Drawn into Ducts, Ground Temp. 30°C & g =1.2°C m/W, depth of laying = 0.8m, laid singly	A	187	231	267	303	329	356	401	436	472	507	543	596	623
3. Laid in Air in trefoil touching, Ambient Temp. 35° C	A	207	254	305	360	411	466	550	626	719	829	956	1092	1210
One Second Short Circuit Current Rating of Conductor	kA	7.15	10.01	13.60	17.20	21.50	26.50	34.30	42.90	57.20	71.50	90.10	115	143

FOR ALL CABLES THE MAXIMUM CONDUCTOR OPERATING TEMPERATURE IS 90°C AND LIMITING CONDUCTOR TEMPERATURE AFTER SHORT CIRCUIT IS 250°C.
LONGER DRUM LENGTHS ARE AVAILABLE TO SPECIFIC CUSTOMER REQUIREMENTS.

18/30 (36)kV

Single Core
Copper Conductors
XLPE Insulated
to IEC 60502-2
Aluminium Wire
Armoured



- 1.HCC⁺™ Copper Conductor
- 2.Semiconductive conductor screen
- 3.DFI™ XLPE Insulation
- 4.Semiconductive insulation screen
- 5.Copper tape screen
- 6. Bedding
- 7. Aluminium Armour
- 8. Outer sheath

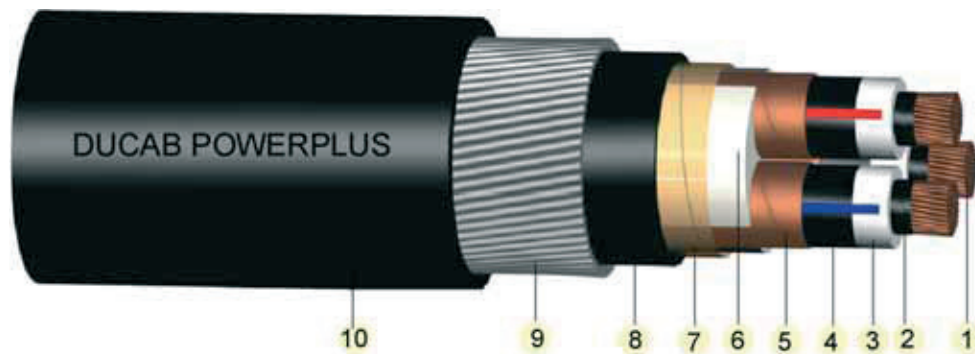
Table 24

Nominal Area of Conductor	mm ²	50	70	95	120	150	185	240	300	400
Conductor Diameter (Max)	mm	8.4	9.9	11.6	13	14.5	16.1	18.4	20.6	23.7
Weight of Conductor (Approx)	Kg/Km	1281	1845	2558	3219	3954	4966	6526	8187	10428
Insulation Thickness (Nominal)	mm	8	8	8	8	8	8	8	8	8
Separation Sheath Thickness	mm	1.8	1.8	1.9	2	2	2.1	2.2	2.3	2.4
Armour Wire Diameter (Nominal)	mm	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15
Outersheath Thickness (Nominal)	mm	3.4	3.5	3.6	3.7	3.9	4	4.1	4.3	4.5
Approximate Overall Diameter	mm	76.5	80.0	84.5	87.5	91.5	95.0	100.5	106.0	113.5
Approximate Cable Weight	Kg/Km	9540	10300	11700	12900	14100	16100	18300	21500	25730
Standard Drum Length	m	300	300	300	250	250	200	200	200	200
Minimum Bending Radius of Cable (during installation)	mm	918	960	1009	1050	1093	1139	1205	1267	1357
Maximum DC resistance of Conductor at 20°C	ohm/Km	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.047
Approximate AC resistance of Conductor at 90°C	ohm/Km	0.493	0.342	0.247	0.196	0.159	0.127	0.098	0.079	0.063
Approximate Reactance at 50 Hertz	ohm/Km	0.14	0.13	0.12	0.12	0.11	0.11	0.11	0.10	0.10
Approximate Impedance at 50 Hertz	ohm/Km	0.51	0.37	0.28	0.23	0.2	0.17	0.14	0.13	0.12
Approximate Capacitance of Cable	µf/Km	0.14	0.16	0.18	0.19	0.2	0.22	0.24	0.26	0.29
Approx. Charging Current per phase at U ₀ = 18kV and F = 50Hz	mA/m	0.79	0.90	1.0	1.1	1.1	1.2	1.4	1.5	1.6
Sustained Current Ratings										
1. Laid Direct, Ground Temp. 30°C & g = 1.2°C m/W, depth of laying = 0.8m, laid singly	A	187	227	267	303	338	383	436	481	534
2. Drawn into ducts, Ground Temp. = 30°C & g = 1.2°C m/W, depth of laying = 0.8m, laid singly	A	160	191	227	258	294	329	378	418	472
3. Laid singly in Air, Ambient Temp. 35° C	A	202	248	304	345	396	451	524	598	681
One Second Short Circuit Current Rating of Conductor	kA	7.15	10.01	13.60	17.20	21.50	26.50	34.30	42.90	57.20

FOR ALL CABLES THE MAXIMUM CONDUCTOR OPERATING TEMPERATURE IS 90°C AND LIMITING CONDUCTOR TEMPERATURE AFTER SHORT CIRCUIT IS 250°C. LONGER DRUM LENGTHS ARE AVAILABLE TO SPECIFIC CUSTOMER REQUIREMENTS.

18/30 (36)kV

**Three Core
Copper Conductors
XLPE Insulated
to IEC 60502-2
Steel Wire Armoured**



- 1.HCC⁺™ Copper Conductor
- 2.Semiconductive conductor screen
- 3.DFI™ XLPE Insulation
- 4.Semiconductive insulation screen
- 5.Copper tape screen
6. Fillers
7. Tape binder
8. Bedding
9. Galvanised steel wire armour
10. Outer sheath

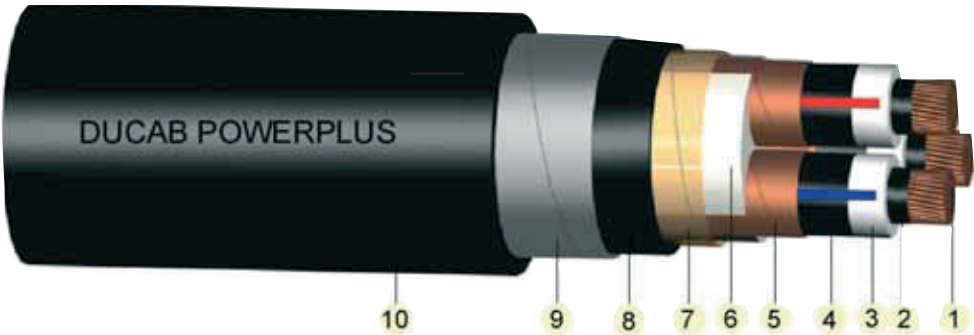
Table 25

Nominal Area of Conductor	mm²	50	70	95	120	150	185	240	300	400
Conductor Diameter (Max)	mm	8.4	9.9	11.6	13	14.5	16.1	18.4	20.6	23.7
Weight of Conductor (Approx)	Kg/Km	1281	1845	2558	3219	3954	4966	6526	8187	10428
Insulation Thickness (Nominal)	mm	8	8	8	8	8	8	8	8	8
Separation Sheath Thickness	mm	1.8	1.8	1.9	2	2	2.1	2.2	2.3	2.4
Steel Tape Thickness (Nominal)	mm	0.5	0.5	0.5	0.8	0.8	0.8	0.8	0.8	0.8
Outersheath Thickness (Nominal)	mm	3.3	3.4	3.5	3.6	3.7	3.8	4	4.1	4.4
Approximate Overall Diameter	mm	73.5	77.0	81.0	84.5	88.0	92.0	97.5	102.5	109.5
Approximate Cable Weight	Kg/Km	6580	7670	8910	10910	12140	13720	16170	18710	23080
Standard Drum Length	m	500	400	300	300	300	250	200	200	200
Minimum Bending Radius of Cable (during installation)	mm	878	922	971	1010	1054	1099	1166	1226	1313
Maximum DC resistance of Conductor at 20°C	ohm/Km	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.047
Approximate AC resistance of Conductor at 90°C	ohm/Km	0.493	0.342	0.247	0.196	0.159	0.127	0.098	0.079	0.063
Approximate Reactance at 50 Hertz	ohm/Km	0.14	0.13	0.12	0.12	0.11	0.11	0.11	0.10	0.10
Approximate Impedance at 50 Hertz	ohm/Km	0.51	0.37	0.28	0.23	0.20	0.17	0.14	0.13	0.12
Approximate Capacitance of Cable	µf/Km	0.14	0.16	0.18	0.19	0.20	0.22	0.24	0.26	0.29
Approx. Charging Current per phase at Uo = 18kV and F = 50Hz	mA/m	0.79	0.90	1.0	1.1	1.1	1.2	1.4	1.5	1.6
Sustained Current Ratings										
1. Laid Direct, Ground Temp. 30°C & g =1.2°C m/W, depth of laying = 0.8m, laid singly	A	187	227	267	303	338	383	436	481	534
2. Drawn into Ducts, Ground Temp. = 30°C & g =1.2°C m/W, depth of laying = 0.8m, laid singly	A	160	191	227	258	294	329	378	416	472
3. Laid singly in Air, Ambient Temp. 35° C	A	202	248	304	345	396	451	524	598	681
One Second Short Circuit Current Rating of Conductor	kA	7.15	10.01	13.60	17.20	21.50	26.50	34.30	42.90	57.20

FOR ALL CABLES THE MAXIMUM CONDUCTOR OPERATING TEMPERATURE IS 90°C AND LIMITING CONDUCTOR TEMPERATURE AFTER SHORT CIRCUIT IS 250°C.
LONGER DRUM LENGTHS ARE AVAILABLE TO SPECIFIC CUSTOMER REQUIREMENTS.

18/30 (36)kV

Three Core
Copper Conductors
XLPE Insulated
to IEC 60502-2
Steel Tape Armoured



- 1.HCC+™ Copper Conductor
- 2.Semiconductive conductor screen
- 3.DFITM XLPE Insulation
- 4.Semiconductive insulation screen
- 5.Copper tape screen
- 6. Fillers
- 7. Tape binder
- 8. Bedding
- 9. Galvanised steel tape armour
- 10. Outer sheath