General Cable

CPR

Medium Voltage Cables



exZhellent HERSATENE ULTROL Vinylec VULPREN

FOREWORD

ONE COMPANY CONNECTING THE WORLD

POWERFUL PRESENCE • PRODUCTS • PERFORMANCE • PEOPLE

General Cable has been a wire and cable innovator for over 170 years, always dedicated to connecting and powering people's lives. With more than 11,000 employees and $6 billion in revenues, we are one of the largest wire and cable manufacturers in the world.

Our company serves customers through a global network of 38 manufacturing facilities in our core operating regions and has worldwide sales representation and distribution. We are dedicated to the production of high-quality aluminum, copper and fiber optic wire and cable and systems solutions for the energy, construction, industrial, specialty and communications sectors. With a vast portfolio of products to meet thousands of diverse application requirements, we continue to invest in research and development in order to maintain and extend our technology leadership by developing new materials, designing new products, and creating new solutions to meet tomorrow's market challenges.

In addition to our strong brand recognition and strengths in technology and manufacturing, General Cable is also competitive in such areas as distribution and logistics, sales and customer service. This combination enables us to better serve our customers as they expand into new geographic markets.

General Cable offers our customers all the strengths and value of a large company, but our people give us the agility and responsiveness of a small one. We service you globally or locally.

Visit our Website at: www.generalcable.com

General Cable | ONE COMPANY CONNECTING THE WORLD

SYMBOLS


Flame retardant


Fire retardant


Halogen Free


Low Acidity and Corrosivity of Evolved Gases


Low Smoke Emission


Hydrocarbon Resistance


Termites Resistant Cables


Increased flexibility



Meter marking


Weathering Test Resistant


Weathering Resistance


Work at very Low Temperature -40°C


Extreme Temperatures Resistance


Watertight


Water Proof AD8


Water Blocked


Mechanical resistance



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THE 7 CPR CLASSES

A_{ca} $B1_{ca}$ $B2_{ca}$ C_{ca} D_{ca} E_{ca} F_{ca}

Visit our CPR Portal for more information.
For further details regarding the Declaration of Performance (DoP), check our CPR DoP Library.

General Cable

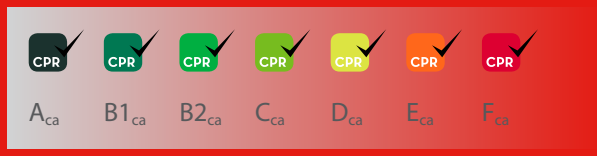


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THE 7 CPR CLASSES



Visit our CPR Portal for more information.
For further details regarding the Declaration of Performance (DoP), check our CPR DoP Library.

General Cable

HERSATENE®

AL/XLPE/WBCWS/PVC (RHV-OL)
6/10 (12) kV and 18/30 (36) kV

NORMAS:

CONSTRUCTION
STS N°DNS
IEC 60502-2

FIRE PERFORMANCE
IEC 60332-1-2

CONSTRUCTION:

1. **CONDUCTOR**
Aluminium, class 2 to IEC 60228.

2. **CONDUCTOR SCREEN**
Extruded semiconductor.

3. **INSULATION**
Cross-linked polyethylene (XLPE).

4. **INSULATION SCREEN**
Extruded semiconductor.

5. **METAL SCREEN**
Copper wire screen.
Longitudinally watertight with swelling tape.

5. **SHEATH**
Polyvinyl chloride (PVC).



APPLICATIONS:

Medium voltage power transmission and distribution networks.
Can be installed in air, trays and buried.

Minimum bending radius during installation= 20 x single core outer diameter.
Minimum bending radius after installation= 15 x single core outer diameter.

Admissible temperature range during the installation: 0°C to +45°C.
Max admissible conductor temperature:
- Operating temperature: 90°C
- Core short circuit: 250°C

APPROVALS: CREDEG

PHYSICAL AND ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm²)	Diameter over insulation [1] (mm)	Overall diameter [1] (mm)	Weight [1] (kg/km)	Minimum bending radius [1] (mm)	Current ratings in air [2] (A)	Current ratings buried [2] (A)	DC conductor resistance at 20 °C (Ohm/km)	AC conductor resistance at 90 °C, 50 Hz (Ohm/km)	Inductance (mH/km)	Reactance at 50 Hz (Ohm/km)	Capaci-tance (µF/km)
6/10 (12) kV AL2 CWS16												
12231D5	1 x 185	23.4	31.9	1 320	475	386	298	0.164	0.211	0.334	0.105	0.380
12231D6	1 x 240	25.8	34.3	1 540	525	457	342	0.125	0.161	0.321	0.101	0.427
18/30 (36) kV AL2 CWS16												
12631G2	1 x 120	29.7	38.4	1 590	515	295	237	0.253	0.325	0.417	0.131	0.169

[1] Values subject to variation depending on dimensional tolerances.

[2] Current ratings according to IEC 60502-2, in air at 40 °C, buried 25 °C, 1.0 m, 1.5 Km/W.

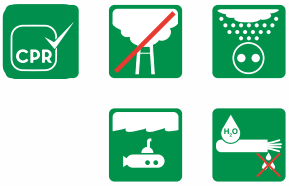
General Cable

HERSATENE class

HERSATENE®Class

EAXeCWB or BAXeCWB or EAXeCeWB
8.7/15 (17.5) kV

CPR
F_{ca}



NORMAS:

CONSTRUCTION
TST 12
NBN HD 620-10B

FIRE PERFORMANCE*
IEC 60754-1
IEC 60754-2

CPR CLASSIFICATION :

DOP 0099 Rev.001
Class F_{ca}

CONSTRUCTION:

1. CONDUCTOR
Aluminium, class 2 to IEC 60228.

2. CONDUCTOR SCREEN
Extruded semiconductor.

3. INSULATION
Cross-linked polyethylene (XLPE).

4. INSULATION SCREEN
Extruded semiconductor.

5. METAL SCREEN
Copper wire screen.
Longitudinally watertight with swelling tape.

6. SHEATH
Polyethylene (PE).

AS OPTION
Triplex construction: 3 single core cables laid up (BAXeCWB).
Radial watertight with additional aluminium copolymer tape (EAXeCeWB).



APPLICATIONS:

Medium voltage power transmission and distribution networks.
Can be installed in air, trays and buried.
AD8 caracteristics only for EAXeCeWB cable type.
Minimum bending radius during installation= 15 x single core outer diameter.
Minimum admissible temperature range during the installation
for EAXeCWB or BAXeCWB cable type: -15°C.
Minimum admissible temperature range during the installation
for EAXeCeWB cable type: 0°C.

*Performance outside CPR scope.

APPROVALS: EANDIS

General Cable

PHYSICAL AND ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm²)	Diameter over insulation [1] (mm)	Overall diameter [1] (mm)	Weight [1] (kg/km)	Minimum bending radius [1] (mm)	Current ratings in air [2] (A)	Current ratings buried [2] (A)	DC conductor resistance at 20 °C (Ohm/km)	AC conductor resistance at 90 °C, 50 Hz (Ohm/km)	Inductance (mH/km)	Reactance at 50 Hz (Ohm/km)	Capaci-tance (µF/km)
EAXeCWB 8,7/15 (17,5) kV												
12301A2	1 x 240	26.7	37.7	1 625	570	510	440	0.124	0.161	0.341	0.107	0.378
12301A3	1 x 400	32.0	43.4	2 230	655	685	570	0.0778	0.102	0.318	0.100	0.454
EAXeCeWB 8,7/15 (17,5) kV												
12301A5	1 x 400	31.8	44.1	2 230	665	685	570	0.0778	0.101	0.318	0.100	0.464
BAXeCWB 8,7/15 (17,5) kV												
12301A4	3 x 1 x 95	19.9	64.6	3 010	570	290	265	0.320	0.411	0.401	0.126	0.262

[1] Values subject to variation depending on dimensional tolerances.
[2] Current ratings according to HD 620-10B Table 1.2, in air at 30 °C, buried 20 °C, 0.7 m, 1.0 Km/W.

EXZHELLENT®

EAXeCeGB-F2
8.7/15 (17.5) kV



STANDARDS:

CONSTRUCTION
TST 12
NBN HD 620-10B

FIRE PERFORMANCE
IEC 60332-3-24
IEC 60332-1-2
IEC 61034
IEC 60754-1
IEC 60754-2

CONSTRUCTION:

1. CONDUCTOR
Aluminium, class 2 to IEC 60228.

2. CONDUCTOR SCREEN
Extruded semiconductor.

3. INSULATION
Cross-linked polyethylene (XLPE).

4. INSULATION SCREEN
Extruded semiconductor.

5. METAL SCREEN
Copper wire screen.
Longitudinally watertight with swelling tape.
Radial watertight with aluminium copolymer tape.

6. SHEATH
LSOH compound.



APPLICATIONS:

Medium voltage power transmission and distribution networks.
Suitable for public building installations.
Can be installed in air, trays and buried.

Minimum bending radius during installation= 15 x single core outer diameter.
Minimum admissible temperature range during the installation: 0°C.

Max admissible conductor temperature:
- Operating temperature: 90°C
- Core short circuit : 250°C

APPROVALS: EANDIS

PHYSICAL AND ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm²)	Diameter over insulation [1] (mm)	Overall diameter [1] (mm)	Weight [1] (kg/km)	Minimum bending radius [1] (mm)	Current ratings in air [2] (A)	Current ratings buried [2] (A)	DC conductor resistance at 20 °C (Ohm/km)	AC conductor resistance at 90 °C, 50 Hz (Ohm/km)	Inductance (mH/km)	Reactance at 50 Hz (Ohm/km)	Capaci-tance (µF/km)
12301A6	1 x 400	31.8	44.1	2 480	675	685	570	0.0778	0.101	0.318	0.100	0.464

[1] Values subject to variation depending on dimensional tolerances..
[2] Current ratings according to HD 620-10B Table 1.2, in air at 30 °C, buried 20 °C, 0.7 m, 1.0 Km/W.

HERSATENE®-FOC

HTA NF C 33-226
6/10 (12) kV, 12/20 (24) kV and 18/30 (36) kV

STANDARDS:

CONSTRUCTION
NF C 33-226

FIRE PERFORMANCE
IEC 60332-1-2 /IEC 60754-1
IEC 60754-2 /IEC 61034

CONSTRUCTION:

1. CONDUCTOR
Aluminium, class 2 to IEC 60228.

2. CONDUCTOR SCREEN
Extruded semiconductor.

3. INSULATION
Cross-linked polyethylene (XLPE).

4. INSULATION SCREEN
Extruded semiconductor.
Longitudinally watertight with powder or swelling tape.

5. METAL SCREEN
Aluminium foil longitudinally applied.

6. SHEATH
Polyethylene (PE).

Triplex construction: 3 single core cables laid up.

OPTIONS
- Aerial version with 50mm² messenger (P).
- All Ground® Over-sheath, designed to be buried directly in the ground.



APPLICATIONS:

Cables for power distribution for medium voltage.

Minimum bending radius during installation=
20 x single core outer diameter.
Minimum bending radius after installation=
13 x single core outer diameter.
Admissible temperature range during the installation: – 10°C to + 50°C.

Max admissible conductor temperature:
- Operating temperature:90°C
- Core short circuit : 250°C

APPROVALS: ENEDIS

PHYSICAL CHARACTERISTICS:

Cross section (mm²)	Diameter over insulation (mm)	Overall diameter (mm)	Weight (kg/km)	Minimum bending radius after installation (mm)
12/20 (24) kV				
1 x 50	21	27	700	351
1 x 95	24	30	950	390
1 x 150	24	31	1 050	403
1 x 240	28	35	1 400	455
1 x 240 cuivre	28	35	2 850	455
1 x 300	32	39	1 650	507
1 x 400 [1]	35	42	2 000	546
1 x 630 [1]	42	51	3 050	663
1 x 800	47	55	3 650	715
1 x 1 000	53	62	4 600	806
1 x 1 200	55	65	5 100	845
3 x 1 x 50	21	59	2 100	351
3 x 1 x 95	24	66	2 800	390
3 x 1 x 150	24	67	3 100	403
3 x 1 x 240	28	75	4 100	455
3 x 1 x 240 cuivre	28	76	8 550	455
3 x 1 x 300	32	82	4 900	507
3 x 1 x 50+P50	21	64	2 400	351
3 x 1 x 95+P50	24	70	3 250	390
3 x 1 x 150+P50	24	73	3 550	403

[1] For the cross sections 400 and 630 mm², it is possible to supply the 3core version if required.
Values subject to variation depending on dimensional tolerances..

18/30 (36) kV				
1 x 50	25	31	900	403
1 x 95	27	33	1 050	429
1 x 150	29	35	1 250	455
1 x 240	31	37	1 550	481
1 x 240 cuivre	31	37	3 000	481
3 x 1 x 50	25	67	2 650	403
3 x 95	27	72	3 150	429
3 x 1 x 150	29	76	3 700	455
3 x 1 x 240	31	80	4 650	481
3 x 1 x 240 cuivre	31	80	9 100	481

It is possible to supply cross sections higher than 240 mm² if required.
Values subject to variation depending on dimensional tolerances..

General Cable

HERSATENE®-FOC

HTA NF C 33-226

6/10 (12) kV, 12/20 (24) kV and 18/30 (36) kV

ELECTRICAL CHARACTERISTICS:

CHARACTERISTICS	Cross-Section (mm²)										
	50	95	150	240	240 CUIVRE	300	400	630	800	1 000	1 200
12/20 (24) kV											
DC conductor resistance at 20 °C (Ω/km)	0.641	0.320	0.206	0.125	0.075	0.100	0.078	0.047	0.036	0.024	0.025
AC conductor resistance, 50 Hz, at 90 °C (Ω / km)	0.820	0.410	0.265	0.160	0.088	0.130	0.102	0.063	0.043	0.039	0.038
Inductance (mH / km)	0.432	0.382	0.348	0.316	0.316	0.306	0.297	0.272	0.267	0.260	0.252
Capacitance (µF / km)	0.174	0.219	0.296	0.365	0.365	0.406	0.441	0.544	0.591	0.657	0.702
18/30 (36) kV											
DC conductor resistance at 20 °C (Ω/km)	0.641	0.320	0.206	0.125	0.075	0.100	0.078	0.047	0.036	0.024	0.025
AC conductor resistance, 50 Hz, at 90 °C (Ω / km)	0.820	0.410	0.265	0.160	0.088	0.130	0.102	0.063	0.043	0.039	0.038
Inductance (mH / km)	0.460	0.401	0.372	0.333	0.333	0.321	0.311	0.288	0.282	0.274	0.265
Capacitance (µF / km)	0.136	0.184	0.223	0.284	0.284	0.314	0.346	0.418	0.445	0.502	0.535

Values subject to variation depending on dimensional tolerances.

MAXIMUM CURRENT RATING:

Cross-Section, mm²	Diretly Buried		In Air	
	Winter	Summer	Winter	Summer
12/20 (24) kV				
50	205	170	205	190
95	300	245	310	285
150	385	310	405	370
240	505	410	555	505
240 cuivre	640	515	710	650
300	560	455	630	575
400	645	520	745	680
630	825	665	1 010	920
800	900	720	1 160	1 060
1 000	1 000	810	1 340	1 220
1 200	1 130	910	1 485	1 340
18/30 (36) kV				
50	200	165	205	190
95	295	240	310	285
150	375	305	405	370
240	500	405	550	500
240 cuivre	635	515	705	640

Operating conditions

In summer
- Ground temperature = 20°C
- Air ambient temperature = 30°C
- Ground thermical resistivity = 1.2 Km/W

In winter
- Ground temperature = 10 °C
- Air ambient temperature = 20°C
- Ground thermal resistivity = 0.85 Km/W
- Laying depth = 0.8 m

The current ratings are calculated for a 3 phase system

General Cable

EXZHELLENT®

HTA NF C 33-226 LSOH
6/10 (12) kV, 12/20 (24) kV and 18/30 (36) kV



STANDARDS:

CONSTRUCTION
NF C 33-226

FIRE PERFORMANCE
IEC 60332-3-24
NF C 32-070 CAT. C1
IEC 60332-1-2/IEC 60754-1
IEC 60754-2/IEC 61034

CONSTRUCTION:

1. CONDUCTOR
Stranded Copper or Aluminium Class 2 to IEC 60228.

2. CONDUCTOR SCREEN
Extruded semiconductor.

3. INSULATION
Cross-linked polyethylene (XLPE).

4. INSULATION SCREEN
Extruded semiconductor.
Longitudinally watertight with powder or swelling tape.

5. METAL SCREEN
Aluminium foil longitudinally applied.

6. SHEATH
LSOH compound (other colours available).

Triplex construction: 3 single core cables laid up.



APPLICATIONS:

Medium voltage power transmission and distribution networks.
Suitable for public building installations.
Can be installed in air, trays and buried.

Minimum bending radius during installation=
20 x single core outer diameter.
Minimum bending radius after installation=
13 x single core outer diameter.

Max admissible conductor temperature:
- Operating temperature:90°C
- Core short circuit : 250°C

APPROVALS: LCIE



HERSATENE class

HERSATENE®Class

N2XS...Y or NA2XS...Y

6/10 (12) kV, 12/20 (24) kV and 18/30 (36) kV

CPR F_{ca}

As option:

STANDARDS:

CONSTRUCTION
DIN VDE 0276-620

FIRE PERFORMANCE*
IEC 60332-1-2

CPR CLASSIFICATION:

DOP 0071 Rev.002
Class F_{ca}

CONSTRUCTION:

1. CONDUCTOR
Cooper or aluminium conductor, class 2 to IEC 60228.
Aluminum class 1 available upon request.

2. CONDUCTOR SCREEN
Extruded semiconductor.

3. INSULATION
Cross-linked polyethylene (XLPE).

4. INSULATION SCREEN
Extruded semiconductor.

5. METAL SCREEN
Copper wire screen.

6. SHEATH
Polyvinyl chloride (PVC).

AS OPTION
Longitudinally watertight with swelling tape (F).



APPLICATIONS:

Medium voltage power transmission and distribution networks.
Can be installed in air, trays and buried.

Minimum admissible temperature range during the installation: -5°C.

Max admissible conductor temperature:
- Operating temperature:90°C
- Core short circuit : 250°C

*Performance outside CPR scope.

APPROVALS: VDE 0276

PHYSICAL CHARACTERISTICS:

CABLE N2XSY

Section (mm²)	Outer Insulation diameter (mm)	Outer diameter (mm)		Bending radius during the installation	Maximum tensile strength (daN)	Weight approx. (kg/km)
		Mini	Maxi			
6/10 (12) kV						
1 x 35/16	14.7	23	28	360	1 750	870
1 x 50/16	15.9	24	29	380	2 500	1 010
1 x 70/16	17.7	26	31	400	3 500	1 250
1 x 95/16	19.5	26	32	430	4 750	1 500
1 x 120/16	20.7	28	34	450	6 000	1 800
1 x 150/25	22.6	29	35	480	7 500	2 150
1 x 185/25	24.4	31	37	510	9 250	2 500
1 x 240/25	26.5	33	39	540	12 000	3 100
1 x 300/25	28.8	36	41	580	15 000	3 700
1 x 400/35	31.6	40	45	620	20 000	4 600
1 x 500/35	35.8	43	48	670	25 000	5 700
12/20 (24) kV						
1 x 35/16	18.7	27	32	420	1 750	1 050
1 x 50/16	19.9	28	33	440	2 500	1 200
1 x 70/16	21.9	30	35	470	3 500	1 450
1 x 95/16	23.5	31	36	490	4 750	1 700
1 x 120/16	24.9	32	38	510	6 000	2 000
1 x 150/25	27	33	39	550	7 500	2 350
1 x 185/25	28.8	35	41	570	9 250	2 750
1 x 240/25	30.7	38	44	600	12 000	3 300
1 x 300/25	33	40	46	640	15 000	4 000
1 x 400/35	35.8	43	49	680	20 000	4 850
1 x 500/35	40.2	46	52	750	25 000	6 000
18/30 (36) kV						
1 x 50/16	25.2	32	38	520	2 500	1 450
1 x 70/16	26.9	34	40	540	3 500	1 700
1 x 95/16	28.5	35	41	570	4 750	1 950
1 x 120/16	29.9	37	43	590	6 000	2 250
1 x 150/25	31.8	38	44	620	7 500	2 650
1 x 185/25	33.6	40	46	650	9 250	3 050
1 x 240/25	35.7	42	48	680	12 000	3 600
1 x 300/25	38	45	51	720	15 000	4 300
1 x 400/35	40.8	48	54	760	20 000	5 200
1 x 500/35	45	51	57	820	25 000	6 400

Values subject to variation depending on dimensional tolerances.

ELECTRICAL CHARACTERISTICS:

CABLE N2XSY

Section (mm²)	Max DC conductor resistance at 20°C (Ω/km)	Ac conductor resistance at 50 Hz and 90°C (Ω/km)	Conductor inductance (H/km)	Conductor capacitance (F/km)	Permissible current rating[1]	
					Free air	Buried
					A	
6/10 (12) kV						
1 x 35/16	0.524	0.668	4.405E-4	2.194E-7	197	187
1 x 50/16	0.387	0.4937	4.158E-4	2.447E-7	236	220
1 x 70/16	0.268	0.3421	3.848E-4	2.865E-7	294	268
1 x 95/16	0.193	0.2467	3.671E-4	3.187E-7	358	320
1 x 120/16	0.153	0.1959	3.534E-4	3.488E-7	413	363
1 x 150/25	0.124	0.1591	3.464E-4	3.88E-7	468	405
1 x 185/25	0.0991	0.1277	3.343E-4	4.241E-7	535	456
1 x 240/25	0.0754	0.0979	3.217E-4	4.684 E-7	631	526
1 x 300/25	0.0601	0.0790	3.106E-4	5.157E-7	722	591
1 x 400/35	0.0470	0.0631	2.993E-4	5.65 E-7	827	662
1 x 500/35	0.0366	0.0508	2.903E-4	6.593E-7	949	744
12/20 (24) kV						
1 x 35/16	0.524	0.6683	4.703E-4	1.565E-7	200	189
1 x 50/16	0.387	0.4937	4.459E-4	1.72E-7	239	222
1 x 70/16	0.268	0.3421	4.143E-4	1.99E-7	297	271
1 x 95/16	0.193	0.2466	3.954E-4	2.194E-7	361	323
1 x 120/16	0.153	0.1958	3.801E-4	2.382E-7	416	367
1 x 150/25	0.124	0.159	3.724E-4	2.629E-7	470	409
1 x 185/25	0.0991	0.1275	3.587E-4	2.854E-7	538	461
1 x 240/25	0.0754	0.0977	3.435E-4	3.131E-7	634	532
1 x 300/25	0.0601	0.0787	3.316E-4	3.425E-7	724	599
1 x 400/35	0.0470	0.0627	3.19E-4	3.783E-7	829	671
1 x 500/35	0.0366	0.0504	3.09E-4	4.319E-7	953	754
18/30 (36) kV						
1 x 50/16	0.387	0.4937	4.737E-4	1.378E-7	241	225
1 x 70/16	0.268	0.3421	4.446E-4	1.537E-7	299	274
1 x 95/16	0.193	0.2466	4.243E-4	1.681E-7	363	327
1 x 120/16	0.153	0.1957	4.081E-4	1.813E-7	418	371
1 x 150/25	0.124	0.1589	3.974E-4	1.986E-7	472	414
1 x 185/25	0.0991	0.1274	3.829E-4	2.143E-7	539	466
1 x 240/25	0.0754	0.0975	3.677E-4	2.336E-7	635	539
1 x 300/25	0.0601	0.0785	3.54E-4	2.541E-7	725	606
1 x 400/35	0.047	0.0624	3.401E-4	2.79E-7	831	680
1 x 500/35	0.0366	0.0500	3.276E-4	3.161E-7	953	765

Current rating operating conditions

- In air: continuous operation, ambient temperature = 30°C
- Buried:
  Cycled load (load factor: 0.7),
  Laying depth =0.7m,
  Soil temperature 20°C,
  Soil thermal resistivity = 1 Km/W

Values subject to variation depending on dimensional tolerances.

PHYSICAL CHARACTERISTICS:

CABLE NA2XSY

Section (mm²)	Outer Insulation diameter (mm)	Outer diameter (mm)		Bending radius during the installation	Maximum tensile strength (daN)	Weight approx. (kg/km)
		Mini	Maxi			
6/10 (12) kV						
1 x 35/16	14.7	23	28	360	1 050	670
1 x 50/16	15.9	24	29	370	1 500	720
1 x 70/16	17.6	26	31	410	2 100	840
1 x 95/16	19.2	26	32	430	2 850	940
1 x 120/16	20.8	28	34	450	3 600	1 050
1 x 150/25	22.1	29	35	480	4 500	1 250
1 x 185/25	24.3	31	37	510	5 550	1 400
1 x 240/25	26.5	33	39	540	7 200	1 600
1 x 300/25	28.8	36	41	580	9 000	1 850
1 x 400/35	31.5	40	45	620	12 000	2 200
1 x 500/35	35.4	43	48	680	15 000	2 650
12/20 (24) kV						
1 x 50/16	19.9	28	33	420	1 500	890
1 x 70/16	21.8	30	35	440	2 100	1 050
1 x 95/16	23.4	31	36	470	2 850	1 150
1 x 120/16	25	32	38	490	3 600	1 250
1 x 150/25	26.3	33	39	520	4 500	1 450
1 x 185/25	28.4	35	41	540	5 550	1 650
1 x 240/25	30.7	38	44	570	7 200	1 850
1 x 300/25	33	40	46	600	9 000	2 100
1 x 400/35	35.5	43	49	640	12 000	2 500
1 x 500/35	39.6	46	52	680	15 000	2 950
18/30 (36) kV						
1 x 50/16	24.9	32	38	510	1 500	1 150
1 x 70/16	26.8	34	40	540	2 100	1 300
1 x 95/16	28.4	35	41	570	2 850	1 400
1 x 120/16	30	37	43	590	3 600	1 550
1 x 150/25	31.3	38	44	620	4 500	1 750
1 x 185/25	33.5	40	46	650	5 550	1 950
1 x 240/25	35.7	42	48	680	7 200	2 150
1 x 300/25	38	45	51	710	9 000	2 400
1 x 400/35	40.9	48	54	760	12 000	2 850
1 x 500/35	45	51	57	820	15 000	3 400

Values subject to variation depending on dimensional tolerances.

ELECTRICAL CHARACTERISTICS:

CABLE NA2XSY

Section (mm²)	Max DC conductor resistance at 20°C (Ω/km)	Ac conductor resistance at 50 Hz and 90°C (Ω/km)	Conductor inductance (H/km)	Conductor capacitance (F/km)	Permissible current rating[1]	
					Free air	Buried
					A	
6/10 (12) kV						
1 x 35/16	0.868	1.113	4.329E-4	2.237E-7	153	145
1 x 50/16	0.641	0.822	4.142E-4	2.447E-7	183	171
1 x 70/16	0.443	0.568	3.861E-4	2.844E-7	228	208
1 x 95/16	0.32	0.410	3.676E-4	3.177E-7	278	248
1 x 120/16	0.253	0.324	3.525E-4	3.508E-7	321	283
1 x 150/25	0.206	0.264	3.516E-4	3.777E-7	364	315
1 x 185/25	0.164	0.211	3.346E-4	4.231E-7	418	357
1 x 240/25	0.125	0.161	3.217E-4	4.684E-7	494	413
1 x 300/25	0.1	0.129	3.106E-4	5.157E-7	568	466
1 x 400/35	0.0778	0.101	3E-4	5.711E-7	660	529
1 x 500/35	0.0605	0.080	2.915E-4	6.511E-7	767	602
12/20 (24) kV						
1 x 50/16	0.641	0.822	4.459E-4	1.726E-7	185	172
1 x 70/16	0.443	0.568	4.157E-4	1.977E-7	231	210
1 x 95/16	0.32	0.410	3.957E-4	2.187E-7	280	251
1 x 120/16	0.253	0.325	3.791E-4	2.395E-7	323	285
1 x 150/25	0.206	0.264	3.756E-4	2.564E-7	366	319
1 x 185/25	0.164	0.211	3.583E-4	2.848E-7	420	361
1 x 240/25	0.125	0.161	3.44E-4	3.131E-7	496	417
1 x 300/25	0.1	0.129	3.316E-4	3.425E-7	569	471
1 x 400/35	0.0778	0.101	3.194E-4	3.771E-7	660	535
1 x 500/35	0.0605	0.08	3.092E-4	4.268E-7	766	609
18/30 (36) kV						
1 x 50/16	0.641	0.822	4.782E-4	1.35E-7	187	174
1 x 70/16	0.443	0.568	4.461E-4	1.528E-7	232	213
1 x 95/16	0.32	0.410	4.246E-4	1.676E-7	282	254
1 x 120/16	0.253	0.3244	4.068E-4	1.822E-7	325	289
1 x 150/25	0.206	0.2647	4.02E-4	1.94E-7	367	322
1 x 185/25	0.164	0.211	3.832E-4	2.139E-7	421	364
1 x 240/25	0.125	0.1611	3.677E-4	2.336E-7	496	422
1 x 300/25	0.1	0.1294	3.54E-4	2.541E-7	568	476
1 x 400/35	0.0778	0.1013	3.405E-4	2.781E-7	659	541
1 x 500/35	0.0605	0.0796	3.306E-4	3.126E-7	764	616

Values subject to variation depending on dimensional tolerances.



HERSATENE class

HERSATENE® Class

N2XS...2Y or NA2XS...2Y
6/10 (12) kV, 12/20 (24) kV and 18/30 (36) kV

CPR
F_{ca}

STANDARDS:

CONSTRUCTION
DIN VDE 0276-620

FIRE PERFORMANCE*
IEC 60754-1
IEC 60754-2
IEC 61034

As option:

CPR CLASSIFICATION:

DOP 0071 Rev.002
Class F_{ca}

CONSTRUCTION:

1. CONDUCTOR
Cooper or aluminium conductor, class 2 to IEC 60228.
Aluminum class 1 available upon request.

2. CONDUCTOR SCREEN
Extruded semiconductor.

3. INSULATION
Cross-linked polyethylene (XLPE).

4. INSULATION SCREEN
Extruded semiconductor.

5. METAL SCREEN
Copper wire screen.

6. SHEATH
Polyethylene (PE).

AS OPTION
Longitudinally watertight with swelling tape (F).
Radial watertight with Aluminium foil (FL).



APPLICATIONS:

Medium voltage power transmission and distribution networks.
Can be installed in air, trays and buried

*Performance outside CPR scope.

APPROVALS: VDE 0276

General Cable

PHYSICAL CHARACTERISTICS:

CABLE N2XS2Y

Section (mm²)	Outer Insulation diameter (mm)	Outer diameter (mm)		Bending radius during the installation	Maximum tensile strength (daN)	Weight approx. (kg/km)
		Mini	Maxi			
6/10 (12) kV						
1 x 35/16	14.7	23	28	360	1 750	800
1 x 50/16	15.9	24	29	380	2 500	930
1 x 70/16	17.7	26	31	400	3 500	1 200
1 x 95/16	19.5	26	32	430	4 750	1 450
1 x 120/16	20.7	28	34	450	6 000	1 700
1 x 150/25	22.6	29	35	480	7 500	2 050
1 x 185/25	24.4	31	37	510	9 250	2 400
1 x 240/25	26.5	33	39	540	12 000	2 950
1 x 300/25	28.8	36	41	580	15 000	3 600
1 x 400/35	31.6	40	45	620	20 000	4 450
1 x 500/35	35.8	43	48	670	25 000	5 600
12/20 (24) kV						
1 x 35/16	18.7	27	32	420	1 750	940
1 x 50/16	19.9	28	33	440	2 500	1 100
1 x 70/16	21.9	30	35	470	3 500	1 350
1 x 95/16	23.5	31	36	490	4 750	1 600
1 x 120/16	24.9	32	38	510	6 000	1 850
1 x 150/25	27	33	39	550	7 500	2 250
1 x 185/25	28.8	35	41	570	9 250	2 650
1 x 240/25	30.7	38	44	600	12 000	3 150
1 x 300/25	33	40	46	640	15 000	3 800
1 x 400/35	35.8	43	49	680	20 000	4 700
1 x 500/35	40.2	46	52	750	25 000	5 900
18/30 (36) kV						
1 x 50/16	25.2	32	38	520	2 500	1 350
1 x 70/16	26.9	34	40	540	3 500	1 600
1 x 95/16	28.5	35	41	570	4 750	1 850
1 x 120/16	29.9	37	43	590	6 000	2 100
1 x 150/25	31.8	38	44	620	7 500	2 500
1 x 185/25	33.6	40	46	650	9 250	2 900
1 x 240/25	35.7	42	48	680	12 000	3 450
1 x 300/25	38	45	51	720	15 000	4 150
1 x 400/35	40.8	48	54	760	20 000	5 100
1 x 500/35	45	51	57	820	25 000	6 200

Values subject to variation depending on dimensional tolerances.

General Cable

HERSATENE® Class

N2XS...2Y or NA2XS...2Y

6/10 (12) kV, 12/20 (24) kV and 18/30 (36) kV

CPR F_{ca}

ELECTRICAL CHARACTERISTICS:

CABLE N2XS2Y

Section (mm²)	Max DC conductor resistance at 20°C (Ω/km)	Ac conductor resistance at 50 Hz and 90°C (Ω/km)	Conductor inductance (H/km)	Conductor capacitance (F/km)	Permissible current rating[1]	
					Free air	Buried
					A	
6/10 (12) kV						
1 x 35/16	0.524	0.668	4.405E-4	2.194E-7	197	187
1 x 50/16	0.387	0.4937	4.158E-4	2.447E-7	236	220
1 x 70/16	0.268	0.3421	3.848E-4	2.865E-7	294	268
1 x 95/16	0.193	0.2467	3.671E-4	3.187E-7	358	320
1 x 120/16	0.153	0.1959	3.534E-4	3.488 E-7	413	363
1 x 150/25	0.124	0.1591	3.464E-4	3.88E-7	468	405
1 x 185/25	0.0991	0.1277	3.343E-4	4.241E-7	535	456
1 x 240/25	0.0754	0.0979	3.217E-4	4.684E-7	631	526
1 x 300/25	0.0601	0.0790	3.106E-4	5.157E-7	722	591
1 x 400/35	0.0470	0.0631	2.993E-4	5.732E-7	827	662
1 x 500/35	0.0366	0.0508	2.903E-4	6.593E-7	949	744
12/20 (24) kV						
1 x 35/16	0.524	0.6683	4.703E-4	1.565E-7	200	189
1 x 50/16	0.387	0.4937	4.459E-4	1.72E-7	239	222
1 x 70/16	0.268	0.3421	4.143E-4	1.99E-7	297	271
1 x 95/16	0.193	0.2466	3.954E-4	2.194E-7	361	323
1 x 120/16	0.153	0.1958	3.801E-4	2.382E-7	416	367
1 x 150/25	0.124	0.159	3.724E-4	2.629E-7	470	409
1 x 185/25	0.0991	0.1275	3.587E-4	2.854E-7	538	461
1 x 240/25	0.0754	0.0977	3.435E-4	3.131E-7	634	532
1 x 300/25	0.0601	0.0787	3.316E-4	3.425E-7	724	599
1 x 400/35	0.0470	0.0627	3.19E-4	3.783E-7	829	671
1 x 500/35	0.0366	0.0504	3.09E-4	4.319E-7	953	754
18/30 (36) kV						
1 x 50/16	0.387	0.4937	4.737E-4	1.378E-7	241	225
1 x 70/16	0.268	0.3421	4.446E-4	1.537E-7	299	274
1 x 95/16	0.193	0.2466	4.243E-4	1.681E-7	363	327
1 x 120/16	0.153	0.1957	4.081E-4	1.813E-7	418	371
1 x 150/25	0.124	0.1589	3.974E-4	1.986E-7	472	414
1 x 185/25	0.0991	0.1274	3.829E-4	2.143E-7	539	466
1 x 240/25	0.0754	0.0975	3.677E-4	2.336E-7	635	539
1 x 300/25	0.0601	0.0785	3.54E-4	2.541E-7	725	606
1 x 400/35	0.0470	0.0624	3.401E-4	2.79E-7	831	680
1 x 500/35	0.0366	0.05	3.276E-4	3.161E-7	953	765

General Cable

Values subject to variation depending on dimensional tolerances.

PHYSICAL CHARACTERISTICS:

CABLE NA2XS2Y

Section (mm²)	Outer Insulation diameter (mm)	Outer diameter (mm)		Bending radius during the installation	Maximum tensile strength (daN)	Weight approx. (kg/km)
		Mini	Maxi			
6/10 (12) kV						
1 x 35/16	14.7	23	28	360	1 050	580
1 x 50/16	15.9	24	29	370	1 500	640
1 x 70/16	17.6	26	31	410	2 100	740
1 x 95/16	19.2	26	32	430	2 850	840
1 x 120/16	20.8	28	34	450	3 600	940
1 x 150/25	22.1	29	35	480	4 500	1 150
1 x 185/25	24.3	31	37	510	5 550	1 300
1 x 240/25	26.5	33	39	540	7 200	1 500
1 x 300/25	28.8	36	41	580	9 000	1 700
1 x 400/35	31.5	40	45	620	12 000	2 100
1 x 500/35	35.4	43	48	680	15 000	2 500
12/20 (24) kV						
1 x 50/16	19.9	28	33	420	1 500	800
1 x 70/16	21.8	30	35	440	2 100	910
1 x 95/16	23.4	31	36	470	2 850	1 050
1 x 120/16	25	32	38	490	3 600	1 150
1 x 150/25	26.3	33	39	520	4 500	1 350
1 x 185/25	28.4	35	41	540	5 550	1 500
1 x 240/25	30.7	38	44	570	7 200	1 750
1 x 300/25	33	40	46	600	9 000	1 950
1 x 400/35	35.5	43	49	640	12 000	2 350
1 x 500/35	39.6	46	52	680	15 000	2 750
18/30 (36) kV						
1 x 50/16	24.9	32	38	510	1 500	1 050
1 x 70/16	26.8	34	40	540	2 100	1 150
1 x 95/16	28.4	35	41	570	2 850	1 300
1 x 120/16	30	37	43	590	3 600	1 400
1 x 150/25	31.3	38	44	620	4 500	1 600
1 x 185/25	33.5	40	46	650	5 550	1 800
1 x 240/25	35.7	42	48	680	7 200	2 000
1 x 300/25	38	45	51	710	9 000	2 250
1 x 400/35	40.9	48	54	760	12 000	2 700
1 x 500/35	45	51	57	820	15 000	3 200

Values subject to variation depending on dimensional tolerances.

HERSATENE® Class

N2XS...2Y or NA2XS...2Y

6/10 (12) kV, 12/20 (24) kV and 18/30 (36) kV

CPR F_{ca}

ELECTRICAL CHARACTERISTICS:

CABLE NA2XS2Y

Section (mm²)	Max DC conductor resistance at 20°C (Ω/km)	Ac conductor resistance at 50 Hz and 90°C (Ω/km)	Conductor inductance (H/km)	Conductor capacitance (F/km)	Permissible current rating[1]	
					Free air	Buried
					A	
6/10 (12) kV						
1 x 35/16	0.868	1.113	4.329E-4	2.237E-7	153	145
1 x 50/16	0.641	0.822	4.142E-4	2.447E-7	183	171
1 x 70/16	0.443	0.568	3.861E-4	2.844E-7	228	208
1 x 95/16	0.32	0.410	3.676E-4	3.177E-7	278	248
1 x 120/16	0.253	0.324	3.525E-4	3.508E-7	321	283
1 x 150/25	0.206	0.264	3.516E-4	3.777E-7	364	315
1 x 185/25	0.164	0.211	3.346E-4	4.231E-7	418	357
1 x 240/25	0.125	0.161	3.217E-4	4.684E-7	494	413
1 x 300/25	0.1	0.129	3.106E-4	5.157E-7	568	466
1 x 400/35	0.0778	0.101	3E-4	5.711E-7	660	529
1 x 500/35	0.0605	0.080	2.915E-4	6.511E-7	767	602
12/20 (24) kV						
1 x 50/16	0.641	0.822	4.459E-4	1.726E-7	185	172
1 x 70/16	0.443	0.568	4.157E-4	1.977E-7	231	210
1 x 95/16	0.32	0.410	3.957E-4	2.187E-7	280	251
1 x 120/16	0.253	0.325	3.791E-4	2.395E-7	323	285
1 x 150/25	0.206	0.264	3.756E-4	2.564E-7	366	319
1 x 185/25	0.164	0.211	3.583E-4	2.848E-7	420	361
1 x 240/25	0.125	0.161	3.44E-4	3.131E-7	496	417
1 x 300/25	0.1	0.129	3.316E-4	3.425E-7	569	471
1 x 400/35	0.0778	0.101	3.194E-4	3.771E-7	660	535
1 x 500/35	0.0605	0.08	3.092E-4	4.268E-7	766	609
18/30 (36) kV						
1 x 50/16	0.641	0.822	4.782E-4	1.35E-7	187	174
1 x 70/16	0.443	0.568	4.461E-4	1.528E-7	232	213
1 x 95/16	0.32	0.410	4.246E-4	1.676E-7	282	254
1 x 120/16	0.253	0.3244	4.068E-4	1.822E-7	325	289
1 x 150/25	0.206	0.2647	4.02E-4	1.94E-7	367	322
1 x 185/25	0.164	0.211	3.832E-4	2.139E-7	421	364
1 x 240/25	0.125	0.1611	3.677E-4	2.336E-7	496	422
1 x 300/25	0.1	0.1294	3.54E-4	2.541E-7	568	476
1 x 400/35	0.0778	0.1013	3.405E-4	2.781E-7	659	541
1 x 500/35	0.0605	0.0796	3.306E-4	3.126E-7	764	616

Values subject to variation depending on dimensional tolerances.

PHYSICAL CHARACTERISTICS:

CABLE N2XS(F)2Y

Section (mm²)	Outer Insulation diameter (mm)	Outer diameter (mm)		Bending radius during the installation	Maximum tensile strength (daN)	Weight approx. (kg/km)
		Mini	Maxi			
6/10 (12) kV						
1 x 35/16	14.7	23	28	360	1 750	800
1 x 50/16	15.9	24	29	380	2 500	930
1 x 70/16	17.7	26	31	400	3 500	1 200
1 x 95/16	19.5	26	32	430	4 750	1 450
1 x 120/16	20.7	28	34	450	6 000	1 700
1 x 150/25	22.6	29	35	480	7 500	2 050
1 x 185/25	24.4	31	37	510	9 250	2 400
1 x 240/25	26.5	33	39	540	12 000	2 950
1 x 300/25	28.8	36	41	580	15 000	3 600
1 x 400/35	31.6	40	45	620	20 000	4 450
1 x 500/35	35.8	43	48	670	25 000	5 600
12/20 (24) kV						
1 x 35/16	18.7	27	32	420	1 750	940
1 x 50/16	19.9	28	33	440	2 500	1 100
1 x 70/16	21.9	30	35	470	3 500	1 350
1 x 95/16	23.5	31	36	490	4 750	1 600
1 x 120/16	24.9	32	38	510	6 000	1 850
1 x 150/25	27	33	39	550	7 500	2 250
1 x 185/25	28.8	35	41	570	9 250	2 650
1 x 240/25	30.7	38	44	600	12 000	3 150
1 x 300/25	33	40	46	640	15 000	3 800
1 x 400/35	35.8	43	49	680	20 000	4 700
1 x 500/35	40.2	46	52	750	25 000	5 900
18/30 (36) kV						
1 x 50/16	25.2	32	38	520	2 500	1 350
1 x 70/16	26.9	34	40	540	3 500	1 600
1 x 95/16	28.5	35	41	570	4 750	1 850
1 x 120/16	29.9	37	43	590	6 000	2 100
1 x 150/25	31.8	38	44	620	7 500	2 500
1 x 185/25	33.6	40	46	650	9 250	2 900
1 x 240/25	35.7	42	48	680	12 000	3 450
1 x 300/25	38	45	51	720	15 000	4 150
1 x 400/35	40.8	48	54	760	20 000	5 100
1 x 500/35	45	51	57	820	25 000	6 200

Values subject to variation depending on dimensional tolerances.

HERSATENE® Class

N2XS...2Y or NA2XS...2Y

6/10 (12) kV, 12/20 (24) kV and 18/30 (36) kV

CPR F_{ca}

ELECTRICAL CHARACTERISTICS:

CABLE N2XS(F)2Y

Section (mm²)	Max DC conductor resistance at 20°C (Ω/km)	Ac conductor resistance at 50 Hz and 90°C (Ω/km)	Conductor inductance (H/km)	Conductor capacitance (F/km)	Permissible current rating[1]	
					Free air	Buried
					A	
6/10 (12) kV						
1 x 35/16	0.524	0.668	4.405E-4	2.194E-7	197	187
1 x 50/16	0.387	0.4937	4.158E-4	2.447E-7	236	220
1 x 70/16	0.268	0.3421	3.848E-4	2.865E-7	294	268
1 x 95/16	0.193	0.2467	3.671E-4	3.187E-7	358	320
1 x 120/16	0.153	0.1959	3.534E-4	3.488 E-7	413	363
1 x 150/25	0.124	0.1591	3.464E-4	3.88E-7	468	405
1 x 185/25	0.0991	0.1277	3.343E-4	4.241E-7	535	456
1 x 240/25	0.0754	0.0979	3.217E-4	4.684E-7	631	526
1 x 300/25	0.0601	0.0790	3.106E-4	5.157E-7	722	591
1 x 400/35	0.0470	0.0631	2.993E-4	5.732E-7	827	662
1 x 500/35	0.0366	0.0508	2.903E-4	6.593E-7	949	744
12/20 (24) kV						
1 x 35/16	0.524	0.6683	4.703E-4	1.565E-7	200	189
1 x 50/16	0.387	0.4937	4.459E-4	1.72E-7	239	222
1 x 70/16	0.268	0.3421	4.143E-4	1.99E-7	297	271
1 x 95/16	0.193	0.2466	3.954E-4	2.194E-7	361	323
1 x 120/16	0.153	0.1958	3.801E-4	2.382E-7	416	367
1 x 150/25	0.124	0.159	3.724E-4	2.629E-7	470	409
1 x 185/25	0.0991	0.1275	3.587E-4	2.854E-7	538	461
1 x 240/25	0.0754	0.0977	3.435E-4	3.131E-7	634	532
1 x 300/25	0.0601	0.0787	3.316E-4	3.425E-7	724	599
1 x 400/35	0.0470	0.0627	3.19E-4	3.783E-7	829	671
1 x 500/35	0.0366	0.0504	3.09E-4	4.319E-7	953	754
18/30 (36) kV						
1 x 50/16	0.387	0.4937	4.737E-4	1.378E-7	241	225
1 x 70/16	0.268	0.3421	4.446E-4	1.537E-7	299	274
1 x 95/16	0.193	0.2466	4.243E-4	1.681E-7	363	327
1 x 120/16	0.153	0.1957	4.081E-4	1.813E-7	418	371
1 x 150/25	0.124	0.1589	3.974E-4	1.986E-7	472	414
1 x 185/25	0.0991	0.1274	3.829E-4	2.143E-7	539	466
1 x 240/25	0.0754	0.0975	3.677E-4	2.336E-7	635	539
1 x 300/25	0.0601	0.0785	3.54E-4	2.541E-7	725	606
1 x 400/35	0.0470	0.0624	3.401E-4	2.79E-7	831	680
1 x 500/35	0.0366	0.05	3.276E-4	3.161E-7	953	765

Current rating operating conditions

- In air: continuous operation, ambient temperature = 30°C
- Buried:
  Cycled load (load factor: 0.7),
  Laying depth =0.7m,
  Soil temperature 20°C,
  Soil thermal resistivity = 1 Km/W

General Cable

Values subject to variation depending on dimensional tolerances.

PHYSICAL CHARACTERISTICS:

CABLE NA2XS(F)2Y

Section (mm²)	Outer Insulation diameter (mm)	Outer diameter (mm)		Bending radius during the installation	Maximum tensile strength (daN)	Weight approx. (kg/km)
		Mini	Maxi			
6/10 (12) kV						
1 x 35/16	14.7	23	28	360	1 050	580
1 x 50/16	15.9	24	29	370	1 500	640
1 x 70/16	17.6	26	31	410	2 100	740
1 x 95/16	19.2	26	32	430	2 850	840
1 x 120/16	20.8	28	34	450	3 600	940
1 x 150/25	22.1	29	35	480	4 500	1 150
1 x 185/25	24.3	31	37	510	5 550	1 300
1 x 240/25	26.5	33	39	540	7 200	1 500
1 x 300/25	28.8	36	41	580	9 000	1 700
1 x 400/35	31.5	40	45	620	12 000	2 100
1 x 500/35	35.4	43	48	680	15 000	2 500
12/20 (24) kV						
1 x 50/16	19.9	28	33	420	1 500	800
1 x 70/16	21.8	30	35	440	2 100	910
1 x 95/16	23.4	31	36	470	2 850	1 050
1 x 120/16	25	32	38	490	3 600	1 150
1 x 150/25	26.3	33	39	520	4 500	1 350
1 x 185/25	28.4	35	41	540	5 550	1 500
1 x 240/25	30.7	38	44	570	7 200	1 750
1 x 300/25	33	40	46	600	9 000	1 950
1 x 400/35	35.5	43	49	640	12 000	2 350
1 x 500/35	39.6	46	52	680	15 000	2 750
18/30 (36) kV						
1 x 50/16	24.9	32	38	510	1 500	1 050
1 x 70/16	26.8	34	40	540	2 100	1 150
1 x 95/16	28.4	35	41	570	2 850	1 300
1 x 120/16	30	37	43	590	3 600	1 400
1 x 150/25	31.3	38	44	620	4 500	1 600
1 x 185/25	33.5	40	46	650	5 550	1 800
1 x 240/25	35.7	42	48	680	7 200	2 000
1 x 300/25	38	45	51	710	9 000	2 250
1 x 400/35	40.9	48	54	760	12 000	2 700
1 x 500/35	45	51	57	820	15 000	3 200

Values subject to variation depending on dimensional tolerances.

HERSATENE® Class

N2XS...2Y or NA2XS...2Y

6/10 (12) kV, 12/20 (24) kV and 18/30 (36) kV

CPR F_{ca}

ELECTRICAL CHARACTERISTICS:

CABLE NA2XS(F)2Y

Section (mm²)	Max DC conductor resistance at 20°C (Ω/km)	Ac conductor resistance at 50 Hz and 90°C (Ω/km)	Conductor inductance (H/km)	Conductor capacitance (F/km)	Permissible current rating[1]	
					Free air	Buried
					A	
6/10 (12) kV						
1 x 35/16	0.868	1.113	4.329E-4	2.237E-7	153	145
1 x 50/16	0.641	0.822	4.142E-4	2.447E-7	183	171
1 x 70/16	0.443	0.568	3.861E-4	2.844E-7	228	208
1 x 95/16	0.32	0.410	3.676E-4	3.177E-7	278	248
1 x 120/16	0.253	0.324	3.525E-4	3.508E-7	321	283
1 x 150/25	0.206	0.264	3.516E-4	3.777E-7	364	315
1 x 185/25	0.164	0.211	3.346E-4	4.231E-7	418	357
1 x 240/25	0.125	0.161	3.217E-4	4.684E-7	494	413
1 x 300/25	0.1	0.129	3.106E-4	5.157E-7	568	466
1 x 400/35	0.0778	0.101	3E-4	5.711E-7	660	529
1 x 500/35	0.0605	0.080	2.915E-4	6.511E-7	767	602
12/20 (24) kV						
1 x 50/16	0.641	0.822	4.459E-4	1.726E-7	185	172
1 x 70/16	0.443	0.568	4.157E-4	1.977E-7	231	210
1 x 95/16	0.32	0.410	3.957E-4	2.187E-7	280	251
1 x 120/16	0.253	0.325	3.791E-4	2.395E-7	323	285
1 x 150/25	0.206	0.264	3.756E-4	2.564E-7	366	319
1 x 185/25	0.164	0.211	3.583E-4	2.848E-7	420	361
1 x 240/25	0.125	0.161	3.44E-4	3.131E-7	496	417
1 x 300/25	0.1	0.129	3.316E-4	3.425E-7	569	471
1 x 400/35	0.0778	0.101	3.194E-4	3.771E-7	660	535
1 x 500/35	0.0605	0.08	3.092E-4	4.268E-7	766	609
18/30 (36) kV						
1 x 50/16	0.641	0.822	4.782E-4	1.35E-7	187	174
1 x 70/16	0.443	0.568	4.461E-4	1.528E-7	232	213
1 x 95/16	0.32	0.410	4.246E-4	1.676E-7	282	254
1 x 120/16	0.253	0.3244	4.068E-4	1.822E-7	325	289
1 x 150/25	0.206	0.2647	4.02E-4	1.94E-7	367	322
1 x 185/25	0.164	0.211	3.832E-4	2.139E-7	421	364
1 x 240/25	0.125	0.1611	3.677E-4	2.336E-7	496	422
1 x 300/25	0.1	0.1294	3.54E-4	2.541E-7	568	476
1 x 400/35	0.0778	0.1013	3.405E-4	2.781E-7	659	541
1 x 500/35	0.0605	0.0796	3.306E-4	3.126E-7	764	616

Values subject to variation depending on dimensional tolerances.

PHYSICAL CHARACTERISTICS:

CABLE N2XS(FL)2Y

Section (mm²)	Outer Insulation diameter (mm)	Outer diameter (mm)		Bending radius during the installation	Maximum tensile strength (daN)	Weight approx. (kg/km)
		Mini	Maxi			
6/10 (12) kV						
1 x 35/16	14.7	23	28	360	1 750	800
1 x 50/16	15.9	24	29	380	2 500	930
1 x 70/16	17.7	26	31	400	3 500	1 200
1 x 95/16	19.5	26	32	430	4 750	1 450
1 x 120/16	20.7	28	34	450	6 000	1 700
1 x 150/25	22.6	29	35	480	7 500	2 050
1 x 185/25	24.4	31	37	510	9 250	2 400
1 x 240/25	26.5	33	39	540	12 000	2 950
1 x 300/25	28.8	36	41	580	15 000	3 600
1 x 400/35	31.6	40	45	620	20 000	4 450
1 x 500/35	35.8	43	48	670	25 000	5 600
12/20 (24) kV						
1 x 35/16	18.7	27	32	420	1 750	940
1 x 50/16	19.9	28	33	440	2 500	1 100
1 x 70/16	21.9	30	35	470	3 500	1 350
1 x 95/16	23.5	31	36	490	4 750	1 600
1 x 120/16	24.9	32	38	510	6 000	1 850
1 x 150/25	27	33	39	550	7 500	2 250
1 x 185/25	28.8	35	41	570	9 250	2 650
1 x 240/25	30.7	38	44	600	12 000	3 150
1 x 300/25	33	40	46	640	15 000	3 800
1 x 400/35	35.8	43	49	680	20 000	4 700
1 x 500/35	40.2	46	52	750	25 000	5 900
18/30 (36) kV						
1 x 50/16	25.2	32	38	520	2 500	1 350
1 x 70/16	26.9	34	40	540	3 500	1 600
1 x 95/16	28.5	35	41	570	4 750	1 850
1 x 120/16	29.9	37	43	590	6 000	2 100
1 x 150/25	31.8	38	44	620	7 500	2 500
1 x 185/25	33.6	40	46	650	9 250	2 900
1 x 240/25	35.7	42	48	680	12 000	3 450
1 x 300/25	38	45	51	720	15 000	4 150
1 x 400/35	40.8	48	54	760	20 000	5 100
1 x 500/35	45	51	57	820	25 000	6 200

Values subject to variation depending on dimensional tolerances.

General Cable

HERSATENE® Class

N2XS...2Y or NA2XS...2Y

6/10 (12) kV, 12/20 (24) kV and 18/30 (36) kV

CPR F_{ca}

ELECTRICAL CHARACTERISTICS:

CABLE N2XS(FL)2Y

Section (mm²)	Max DC conductor resistance at 20°C (Ω/km)	Ac conductor resistance at 50 Hz and 90°C (Ω/km)	Conductor inductance (H/km)	Conductor capacitance (F/km)	Permissible current rating[1]	
					Free air	Buried
					A	
6/10 (12) kV						
1 x 35/16	0.524	0.668	4.405E-4	1.565E-7	197	187
1 x 50/16	0.387	0.4937	4.158E-4	2.447E-7	236	220
1 x 70/16	0.268	0.3421	3.848E-4	2.865E-7	294	268
1 x 95/16	0.193	0.2467	3.671E-4	3.187E-7	358	320
1 x 120/16	0.153	0.1959	3.534E-4	3.488 E-7	413	363
1 x 150/25	0.124	0.1591	3.464E-4	3.88E-7	468	405
1 x 185/25	0.0991	0.1277	3.343E-4	4.241E-7	535	456
1 x 240/25	0.0754	0.0979	3.217E-4	4.684E-7	631	526
1 x 300/25	0.0601	0.0790	3.106E-4	5.157E-7	722	591
1 x 400/35	0.0470	0.0631	2.993E-4	5.732E-7	827	662
1 x 500/35	0.0366	0.0508	2.903E-4	6.593E-7	949	744
12/20 (24) kV						
1 x 35/16	0.524	0.6683	4.703E-4	1.565E-7	200	189
1 x 50/16	0.387	0.4937	4.459E-4	1.72E-7	239	222
1 x 70/16	0.268	0.3421	4.143E-4	1.99E-7	297	271
1 x 95/16	0.193	0.2466	3.954E-4	2.194E-7	361	323
1 x 120/16	0.153	0.1958	3.801E-4	2.382E-7	416	367
1 x 150/25	0.124	0.159	3.724E-4	2.629E-7	470	409
1 x 185/25	0.0991	0.1275	3.587E-4	2.854E-7	538	461
1 x 240/25	0.0754	0.0977	3.435E-4	3.131E-7	634	532
1 x 300/25	0.0601	0.0787	3.316E-4	3.425E-7	724	599
1 x 400/35	0.0470	0.0627	3.19E-4	3.783E-7	829	671
1 x 500/35	0.0366	0.0504	3.09E-4	4.319E-7	953	754
18/30 (36) kV						
1 x 50/16	0.387	0.4937	4.737E-4	1.378E-7	241	225
1 x 70/16	0.268	0.3421	4.446E-4	1.537E-7	299	274
1 x 95/16	0.193	0.2466	4.243E-4	1.681E-7	363	327
1 x 120/16	0.153	0.1957	4.081E-4	1.813E-7	418	371
1 x 150/25	0.124	0.1589	3.974E-4	1.986E-7	472	414
1 x 185/25	0.0991	0.1274	3.829E-4	2.143E-7	539	466
1 x 240/25	0.0754	0.0975	3.677E-4	2.336E-7	635	539
1 x 300/25	0.0601	0.0785	3.54E-4	2.541E-7	725	606
1 x 400/35	0.0470	0.0624	3.401E-4	2.79E-7	831	680
1 x 500/35	0.0366	0.05	3.276E-4	3.161E-7	953	765

General Cable

Values subject to variation depending on dimensional tolerances.

PHYSICAL CHARACTERISTICS:

CABLE NA2XS(FL)2Y

Section (mm²)	Outer Insulation diameter (mm)	Outer diameter (mm)		Bending radius during the installation	Maximum tensile strength (daN)	Weight approx. (kg/km)
		Mini	Maxi			
6/10 (12) kV						
1 x 35/16	14.7	23	28	360	1 050	580
1 x 50/16	15.9	24	29	370	1 500	640
1 x 70/16	17.6	26	31	410	2 100	740
1 x 95/16	19.2	26	32	430	2 850	840
1 x 120/16	20.8	28	34	450	3 600	940
1 x 150/25	22.1	29	35	480	4 500	1 150
1 x 185/25	24.3	31	37	510	5 550	1 300
1 x 240/25	26.5	33	39	540	7 200	1 500
1 x 300/25	28.8	36	41	580	9 000	1 700
1 x 400/35	31.5	40	45	620	12 000	2 100
1 x 500/35	35.4	43	48	680	15 000	2 500
12/20 (24) kV						
1 x 50/16	19.9	28	33	420	1 500	800
1 x 70/16	21.8	30	35	440	2 100	910
1 x 95/16	23.4	31	36	470	2 850	1 050
1 x 120/16	25	32	38	490	3 600	1 150
1 x 150/25	26.3	33	39	520	4 500	1 350
1 x 185/25	28.4	35	41	540	5 550	1 500
1 x 240/25	30.7	38	44	570	7 200	1 750
1 x 300/25	33	40	46	600	9 000	1 950
1 x 400/35	35.5	43	49	640	12 000	2 350
1 x 500/35	39.6	46	52	680	15 000	2 750
18/30 (36) kV						
1 x 50/16	24.9	32	38	510	1 500	1 050
1 x 70/16	26.8	34	40	540	2 100	1 150
1 x 95/16	28.4	35	41	570	2 850	1 300
1 x 120/16	30	37	43	590	3 600	1 400
1 x 150/25	31.3	38	44	620	4 500	1 600
1 x 185/25	33.5	40	46	650	5 550	1 800
1 x 240/25	35.7	42	48	680	7 200	2 000
1 x 300/25	38	45	51	710	9 000	2 250
1 x 400/35	40.9	48	54	760	12 000	2 700
1 x 500/35	45	51	57	820	15 000	3 200

Values subject to variation depending on dimensional tolerances.

HERSATENE® Class

N2XS...2Y or NA2XS...2Y

6/10 (12) kV, 12/20 (24) kV and 18/30 (36) kV

CPR F_{ca}

ELECTRICAL CHARACTERISTICS:

CABLE NA2XS(FL)2Y

Section (mm²)	Max DC conductor resistance at 20°C (Ω/km)	Ac conductor resistance at 50 Hz and 90°C (Ω/km)	Conductor inductance (H/km)	Conductor capacitance (F/km)	Permissible current rating[1]	
					Free air	Buried
					A	
6/10 (12) kV						
1 x 35/16	0.868	1.113	4.329E-4	2.237E-7	153	145
1 x 50/16	0.641	0.822	4.142E-4	2.447E-7	183	171
1 x 70/16	0.443	0.568	3.861E-4	2.844E-7	228	208
1 x 95/16	0.32	0.410	3.676E-4	3.177E-7	278	248
1 x 120/16	0.253	0.324	3.525E-4	3.508E-7	321	283
1 x 150/25	0.206	0.264	3.516E-4	3.777E-7	364	315
1 x 185/25	0.164	0.211	3.346E-4	4.231E-7	418	357
1 x 240/25	0.125	0.161	3.217E-4	4.684E-7	494	413
1 x 300/25	0.1	0.129	3.106E-4	5.157E-7	568	466
1 x 400/35	0.0778	0.101	3E-4	5.711E-7	660	529
1 x 500/35	0.0605	0.080	2.915E-4	6.511E-7	767	602
12/20 (24) kV						
1 x 50/16	0.641	0.822	4.459E-4	1.726E-7	185	172
1 x 70/16	0.443	0.568	4.157E-4	1.977E-7	231	210
1 x 95/16	0.32	0.410	3.957E-4	2.187E-7	280	251
1 x 120/16	0.253	0.325	3.791E-4	2.395E-7	323	285
1 x 150/25	0.206	0.264	3.756E-4	2.564E-7	366	319
1 x 185/25	0.164	0.211	3.583E-4	2.848E-7	420	361
1 x 240/25	0.125	0.161	3.44E-4	3.131E-7	496	417
1 x 300/25	0.1	0.129	3.316E-4	3.425E-7	569	471
1 x 400/35	0.0778	0.101	3.194E-4	3.771E-7	660	535
1 x 500/35	0.0605	0.08	3.092E-4	4.268E-7	766	609
18/30 (36) kV						
1 x 50/16	0.641	0.822	4.782E-4	1.35E-7	187	174
1 x 70/16	0.443	0.568	4.461E-4	1.528E-7	232	213
1 x 95/16	0.32	0.410	4.246E-4	1.676E-7	282	254
1 x 120/16	0.253	0.3244	4.068E-4	1.822E-7	325	289
1 x 150/25	0.206	0.2647	4.02E-4	1.94E-7	367	322
1 x 185/25	0.164	0.211	3.832E-4	2.139E-7	421	364
1 x 240/25	0.125	0.1611	3.677E-4	2.336E-7	496	422
1 x 300/25	0.1	0.1294	3.54E-4	2.541E-7	568	476
1 x 400/35	0.0778	0.1013	3.405E-4	2.781E-7	659	541
1 x 500/35	0.0605	0.0796	3.306E-4	3.126E-7	764	616

General Cable

Values subject to variation depending on dimensional tolerances.



HERSATENE®

ARE4H5EX
12/20 (24) kV



STANDARDS:

CONSTRUCTION
DC 4390
ENEL GSC001

FIRE PERFORMANCE
IEC 60754-1
IEC 60754-2
IEC 61034

CONSTRUCTION:

1. CONDUCTOR
Stranded Aluminium Class 2 to IEC 60228.

2. CONDUCTOR SCREEN
Extruded semiconductor.

3. INSULATION
Cross-linked polyethylene (XLPE).

4. INSULATION SCREEN
Extruded semiconductor.

5. METAL SCREEN
Aluminium foil longitudinally applied.

6. SHEATH
Polyethylene (PE).



APPLICATIONS:

Cables for underground power distribution for medium voltage.

Minimum bending radius after installation= 20 x cable diameter.
Minimum bending radius after installation= 15 x cable diameter.

Max admissible conductor temperature:
- Operating temperature: 90°C
- Core short circuit: 250°C

APPROVALS: IMQ

PHYSICAL AND ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm²)	Diameter over insulation [1] (mm)	Overall diameter [1] (mm)	Weight [1] (kg/km)	Minimum bending radius [1] [3] (mm)	Current ratings in air [2] (A)	Current ratings buried [2] (A)	DC conductor resistance at 20 °C (Ohm/km)	AC conductor resistance at 90 °C, 50 Hz (Ohm/km)	Inductance (mH/km)	Reactance at 50 Hz (Ohm/km)	Capaci-tance (µF/km)
1586119	1x185	25,8	33,4	1 180	470	-	360	0,164	0,211	0,344	0,108	0,296
1586316	3x1x95	21,3	62,5	2 450	610	-	245	0,320	0,411	0,393	0,124	0,231
1586319	3x1x185	25,8	72,2	3 545	700	-	360	0,164	0,211	0,351	0,110	0,296
1586320	3x1x240	28,2	77,4	4 215	755	-	490	0,124	0,161	0,336	0,106	0,331

[1] Values subject to variation depending on dimensional tolerances.

[2] Current ratings according to NCDC 4384, three conductors trefoil, buried 20 °C, 1,2 m, 1.0 Km/W.

[3] Minimum bending radius according to CEI 11-17.

General Cable

HERSATENE®

ARE4H5EXY
12/20 (24) kV

STANDARDS:

CONSTRUCTION
DC 4390
ENEL GSC002

FIRE PERFORMANCE
IEC 60754-1
IEC 60754-2
IEC 61034

CONSTRUCTION:

1. CONDUCTOR
Stranded Aluminium Class 2 to IEC 60228.

2. CONDUCTOR SCREEN
Extruded semiconductor.

3. INSULATION
Cross-linked polyethylene (XLPE).

4. INSULATION SCREEN
Extruded semiconductor.

5. METAL SCREEN
Aluminium foil longitudinally applied.

6. SHEATH
Polyethylene (PE).

7. MESSENGER (Y)
50 mm² steel wired covered with aluminium.



APPLICATIONS:

Cables for aerial power distribution for medium voltage

Minimum bending radius during installation=
20 x single core outer diameter.
Minimum bending radius after installation=
15 x single core outer diameter.

Max admissible conductor temperature:
- Operating temperature: 90°C
- Core short circuit: 250°C

APPROVALS: IMQ

PHYSICAL AND ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm²)	Diameter over insulation [1] (mm)	Overall diameter [1] (mm)	Weight [1] (kg/km)	Minimum bending radius [3] (mm)	Current ratings in air [2] (A)	Current ratings buried [2] (A)	DC conductor resistance at 20 °C (Ohm/km)	AC conductor resistance at 90 °C, 50 Hz (Ohm/km)	Inductance (mH/km)	Reactance at 50 Hz (Ohm/km)	Capaci-tance (µF/km)
1584313	3x1x35+50Y	17,0	53,8	1 725	466	140	-	0,868	1,11	0,441	0,139	0,167
1584314	3x1x50+50Y	18,1	56,4	1 900	490	170	-	0,641	0,822	0,421	0,132	0,183
1584316	3x1x95+50Y	21,3	64,8	2 535	565	255	-	0,320	0,411	0,370	0,116	0,231
1584318	3x1x150+50Y	24,3	72,5	3 215	630	335	-	0,206	0,265	0,345	0,108	0,274

[1] Values subject to variation depending on dimensional tolerances.
[2] Current ratings according to DC4390, air 40 °C.
[3] Minimum bending radius according to CEI 11-17.

HERSATENE®

YMeKrvaslqwd
6/10 (12) kV

STANDARDS:

NEN 3620 – HD620

CONSTRUCTION:

1. **CONDUCTOR**
Aluminium class 1 to IEC 60228.

2. **CONDUCTOR SCREEN**
Extruded semiconductor.

3. **INSULATION**
Cross-linked polyethylene (XLPE).

4. **INSULATION SCREEN**
Extruded semiconductor.
Assembly with extruded fillers.

5. **METAL SCREEN**
Copper wires water-blocked with swelling tape(s).

6. **SHEATH**
Polyethylene (PE).



APPLICATIONS:

Medium voltage power transmission and distribution networks.
Longitudinally and quasi transversally watertight design.

Minimum bending radius during installation=
10 x (outer diameter + conductor diameter).
Minimum cable temperature during the installation: 0°C.

Max admissible conductor temperature:
- Operating temperature: 90°C
- Core short circuit : 250°C

APPROVALS: ENEXIS

PHYSICAL AND ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm²)	Diameter over insulation [1] (mm)	Overall diameter [1] (mm)	Weight [1] (kg/km)	Minimum bending radius [1] (mm)	Current ratings in air [2] (A)	Current ratings buried [2] (A)	DC conductor resistance at 20 °C (Ohm/km)	AC conductor resistance at 90 °C, 50 Hz (Ohm/km)	Inductance (mH/km)	Reactance at 50 Hz (Ohm/km)	Capaci-tance (µF/km)
14983D3	3x150	21,4	65,0	4 345	785	281	245	0,206	0,265	0,347	0,109	0,341

[1] Values subject to variation depending on dimensional tolerances.
[2] Current ratings according to IEC 60502-2, in air at 40 °C, buried 25 °C, 1.0 m, 1.5 Km/W.

HERSATENE class

HERSATENE®Class

TSLF

6/10 (12) kV, 12/20 (24) kV and 18/30 (36) kV

CPR
F_{ca}

STANDARDS:

CONSTRUCTION
HD 620-10K

FIRE PERFORMANCE* (OPTION)
IEC 60754-1/IEC 60754-2
IEC 61034

As option:

CPR CLASSIFICATION :

DOP 0165 Rev.001
Class F_{ca}

CONSTRUCTION:

1. CONDUCTOR
Water-blocked aluminium, class 2 to IEC 60228.

2. CONDUCTOR SCREEN
Extruded semiconductor.

3. INSULATION
Cross-linked polyethylene (XLPE).

4. INSULATION SCREEN
Extruded semiconductor.

5. METAL SCREEN
Copper wire screen.
Longitudinally watertight with swelling tape(s).
Radial watertight with Aluminium copolymer tape.

6. SHEATH
Polyethylene (PE) with extruded semi-conducting layer (TSLF).

OPTIONS
- Polyethylene without semi-conducting layer (TSLE).
- LSOH compound (TSLI).



APPLICATIONS:

Medium voltage power transmission and distribution networks.
Can be installed in air, trays and buried.

Minimum bending radius during installation=
20 x single core outer diameter.
Minimum bending radius after installation=
15 x single core outer diameter.

Admissible temperature range during the installation:
0°C to + 45°C.

Max admissible conductor temperature:
- Operating temperature:90°C
- Core short circuit : 250°C

*Performance outside CPR scope.

PHYSICAL AND ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm^2)	Diameter over insulation [1] (mm)	Overall diameter [1] (mm)	Weight [1] (kg/km)	Minimum bending radius [1] (mm)	Current ratings in air [2] (A)	Current ratings buried [2] (A)	DC conductor resistance at 20 °C (Ohm/km)	AC conductor resistance at 90 °C, 50 Hz (Ohm/km)	Inductance (mH/km)	Reactance at 50 Hz (Ohm/km)	Capaci-tance (µF/km)
6/10 (12) kV												
71951A0	1x240	25,7	34,7	1 505	530	-	455	0,125	0,161	0,325	0,102	0,425
71951A1	1x400	30,6	40,0	2 030	360	-	600	0,0778	0,102	0,302	0,095	0,519
10/12 (24) kV												
71961A3	1x50	19,9	27,7	710	355	-	185	0,641	0,822	0,455	0,143	0,162
71961B3	1x240	29,9	39,1	1 715	570	-	455	0,125	0,161	0,347	0,109	0,285
71961A2	1x400	34,8	44,2	2 275	670	-	600	0,0778	0,102	0,321	0,101	0,344
15633E3	3x1x50	19,9	60,0	2 140	510	-	185	0,641	0,822	0,465	0,146	0,162
71963A0	3x1x95	23,1	67,2	3 040	590	-	275	0,320	0,411	0,407	0,128	0,202
71963A1	3x1x150	25,9	73,7	3 705	660	-	355	0,206	0,265	0,382	0,120	0,236
15633E4	3x1x240	29,9	84,6	5 170	770	-	455	0,125	0,161	0,357	0,112	0,285
18/30 (36) kV												
71961A8	1x150	30,9	40,5	1 770	545	-	355	0,206	0,265	0,407	0,128	0,179
71961B4	1x630	48,2	29,9	4 200	900	-	745	0,0469	0,0648	0,328	0,103	0,324

[1] Values subject to variation depending on dimensional tolerances.
[2] Current ratings according to HD 620-10K, trefoil.

HERSATENE class

HERSATENE®Class

LXHIOZ1 (be)

6/10 (12) kV, 8.7/15 (17.5) kV and 18/30 (36) kV

CPR
F_{ca}



STANDARDS:

CONSTRUCTION
DMA C33-251/E
IEC 60502-2
NP 665

FIRE PERFORMANCE*
IEC 60754-1
IEC 60754-2
IEC 61034

CPR CLASSIFICATION :

DOP 0107 Rev.001
Class F_{ca}

CONSTRUCTION:

1. CONDUCTOR
Aluminium, class 2 to IEC 60228.

2. CONDUCTOR SCREEN
Extruded semiconductor.

3. INSULATION
Cross-linked polyethylene (XLPE).

4. INSULATION SCREEN
Extruded semiconductor.

5. METAL SCREEN
Copper wire screen
Longitudinally watertight with swelling tape.

6. SHEATH
Polyethylene (PE) with extruded semi-conducting layer.



APPLICATIONS:

Medium voltage power transmission and distribution networks.
Can be installed in air, trays and buried.

Minimum bending radius during installation=
20 x single core outer diameter.
Minimum bending radius after installation=
15 x single core outer diameter.

Admissible temperature range during the installation:
0°C to + 45°C.

Max admissible conductor temperature:
Operating temperature: 90°C
Core short circuit : 250°C

*Performance outside CPR scope.

APPROVALS: EDP

General Cable

PHYSICAL AND ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm²)	Diameter over insulation [1] (mm)	Overall diameter [1] (mm)	Weight [1] (kg/km)	Minimum bending radius [1] (mm)	Current ratings in air [2] (A)	Current ratings buried [2] (A)	DC conductor resistance at 20 °C (Ohm/km)	AC conductor resistance at 90 °C, 50 Hz (Ohm/km)	Inductance (mH/km)	Reactance at 50 Hz (Ohm/km)	Capaci-tance (µF/km)
6/10 (12) kV												
7033117	120	20,8	28,6	990	430	325	269	0,253	0,325	0,359	0,113	0,330
7033120	240	26,1	34,3	1 465	515	506	394	0,125	0,161	0,321	0,101	0,433
8.7/15 (17.5) kV												
7033117	120	23,0	31,0	1 095	470	325	269	0,253	0,325	0,375	0,118	0,263
7033120	240	28,3	36,7	1 595	555	506	394	0,125	0,161	0,335	0,105	0,341
18/30 (36) kV												
7036117	120	30,0	38,6	1 495	580	325	269	0,253	0,325	0,419	0,132	0,171
7036120	240	35,3	44,1	2 045	665	506	394	0,125	0,161	0,371	0,117	0,216

[1] Values subject to variation depending on dimensional tolerances.

[2] Current ratings according to DMA-C33-251/E Quadro D-1, three conductors trefoil, air 30 °C, buried 20 °C, 1,1 m, 1,2 Km/W.

EXZHELLENT®

LXHIOZ1 (be, frt)
18/30 (36) kV

STANDARDS:

CONSTRUCTION
DMA C33-251/E
IEC 60502-2
NP 665

FIRE PERFORMANCE
IEC 60332-3-23
IEC 60332-1-2
IEC 60754-1
IEC 60754-2
IEC 61034



CONSTRUCTION:

1. CONDUCTOR
Aluminium, class 2 to IEC 60228.

2. CONDUCTOR SCREEN
Extruded semiconductor.

3. INSULATION
Cross-linked polyethylene (XLPE).

4. INSULATION SCREEN
Extruded semiconductor.

5. METAL SCREEN
Copper wire screen.
Longitudinally watertight with swelling tape.

6. SHEATH
LSOH compound.



APPLICATIONS:

Medium voltage power transmission and distribution networks.
Suitable for installations for high fire risk.
Can be installed in air, trays and buried.

APPROVALS: EDP

PHYSICAL AND ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm²)	Diameter over insulation [1] (mm)	Overall diameter [1] (mm)	Weight [1] (kg/km)	Minimum bending radius [1] (mm)	Current ratings in air [2] (A)	Current ratings buried [2] (A)	DC conductor resistance at 20 °C (Ohm/km)	AC conductor resistance at 90 °C, 50 Hz (Ohm/km)	Inductance (mH/km)	Reactance at 50 Hz (Ohm/km)	Capaci-tance (µF/km)
7049120	240	35,3	47,5	2 600	715	506	394	0,124	0,161	0,386	0,121	0,216

[1] Values subject to variation depending on dimensional tolerances.
[2] Current ratings according to DMA-C33-251/E Quadro D-1, three conductors trefoil, air 30 ºC, buried 20 ºC, 1,1 m, 1,2 Km/W.

HERSATENE® Class

RHZ1-2OL AL H16
12/20 (24) kV

CPR
F_{ca}

STANDARDS:

CONSTRUCTION
GN FENOSA 01434 9 SP V 0019

FIRE PERFORMANCE*
IEC 60754-1
IEC 60754-2

CPR CLASSIFICATION:

DOP 0015 Rev.001
Class F_{ca}

CONSTRUCTION:

1. **CONDUCTOR**
Water-blocked aluminium, class 2 to IEC 60228.

2. **CONDUCTOR SCREEN**
Extruded semiconductor.

3. **INSULATION**
Cross-linked polyethylene (XLPE).

4. **INSULATION SCREEN**
Extruded semiconductor.

5. **METAL SCREEN**
Longitudinally watertight with swelling tape.

6. **SHEATH**
Polyethylene (PE).



APPLICATIONS:

Can be installed in air, trays and buried.
Abrasion and tear-resistant jacket. Easier slide.

*Performance outside CPR scope.

APPROVALS: AENOR

PHYSICAL AND ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm^2)	Diameter over insulation [1] (mm)	Overall diameter [1] (mm)	Weight [1] (kg/km)	Minimum bending radius [1] (mm)	Current ratings in air [2] (A)	Current ratings buried [2] (A)	DC conductor resistance at 20 °C (Ohm/km)	AC conductor resistance at 90 °C, 50 Hz (Ohm/km)	Inductance (mH/km)	Reactance at 50 Hz (Ohm/km)	Capaci-tance (µF/km)
1244116	95	23,2	31,9	1 060	480	255	205	0,320	0,411	0,403	0,127	0,203
1244118	150	25,9	35,2	1 310	530	335	260	0,206	0,265	0,380	0,119	0,236
1244120	240	29,9	39,2	1 670	590	455	345	0,125	0,161	0,349	0,110	0,285

[1] Values subject to variation depending on dimensional tolerances.

[2] Current ratings according to UNE 211435 Table A.3.2, three conductors trefoil, air 40 °C, buried 25 °C, 1 m, 1.5 Km/W.

HERSATENE class

HERSATENE® Class

RHZ1-OL H16

12/20 (24) kV and 18/30 (36) kV

CPR F_{ca}

STANDARDS:

CONSTRUCTION
ENDESA DND00100

FIRE PERFORMANCE*
IEC 60754-1
IEC 60754-2

CPR CLASSIFICATION:

DOP 0015 Rev.001
Class $\mathbf{F}_{ca}$

CONSTRUCTION:

1. **CONDUCTOR**
Aluminium, class 2 to IEC 60228.

2. **CONDUCTOR SCREEN**
Extruded semiconductor.

3. **INSULATION**
Cross-linked polyethylene (XLPE).

4. **INSULATION SCREEN**
Extruded semiconductor.

5. **METAL SCREEN**
Longitudinally watertight with swelling tape.

6. **SHEATH**
Polyethylene (PE).



APPLICATIONS:

Can be installed in air, trays and buried.
Abrasion and tear-resistant jacket. Easier sliding.
Halogen-free cable with waterblocked metallic screen.

Maximum conductor temperature 90°C.

*Performance outside CPR scope.

APPROVALS: AENOR

PHYSICAL AND ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm^2)	Diameter over insulation [1] (mm)	Overall diameter [1] (mm)	Weight [1] (kg/km)	Minimum bending radius [1] (mm)	Current ratings in air [2] (A)	Current ratings buried [2] (A)	DC conductor resistance at 20 °C (Ohm/km)	AC conductor resistance at 90 °C, 50 Hz (Ohm/km)	Inductance (mH/km)	Reactance at 50 Hz (Ohm/km)	Capaci-tance (µF/km)
12/20 (24) kV												
1282114	50	19,9	28,2	800	420	170	140	0,641	0,822	0,458	0,144	0,162
1282116	95	23,1	31,8	1 035	475	255	205	0,320	0,411	0,405	0,127	0,202
1282118	150	26,1	35,4	1 295	530	335	260	0,206	0,265	0,378	0,119	0,239
1282120	240	30,0	39,3	1 670	585	455	345	0,125	0,161	0,348	0,109	0,286
1282122	400	35,0	44,3	2 230	660	610	445	0,0778	0,102	0,322	0,101	0,346
18/30 (36) kV												
1284114	50	24,9	33,6	1 040	505	170	140	0,641	0,822	0,493	0,155	0,126
1284116	95	28,1	37,4	1 315	565	255	205	0,320	0,411	0,437	0,137	0,155
1284118	150	31,1	40,4	1 575	610	335	260	0,206	0,265	0,405	0,127	0,181
1284120	240	35,0	44,3	1 975	665	455	345	0,125	0,161	0,372	0,117	0,214
1284122	400	40,0	49,3	2 575	740	610	445	0,0778	0,102	0,343	0,108	0,256

[1] Values subject to variation depending on dimensional tolerances.
[2] Current ratings according to UNE 211435 Table A.3.2, three conductors trefoil, air 40 °C, buried 25 °C, 1 m, 1.5 Km/W.

VULPREN® Class

HEPRZ1 AL H16
12/20 (24) kV and 18/30 (36) kV

CPR F_{ca}

STANDARDS:

CONSTRUCTION
IBERDROLA NI 56.43.01

FIRE PERFORMANCE*
IEC 60754-1
IEC 60754-2

CPR CLASSIFICATION:

DOP 0014 Rev.001
Class F_{ca}

CONSTRUCTION:

1. **CONDUCTOR**
Aluminium, semi-rigid class 2 to IEC 60228.

2. **CONDUCTOR SCREEN**
Extruded semiconductor.

3. **INSULATION**
High-modulus ethylene-propylene 105 °C (HEPR)).

4. **INSULATION SCREEN**
Extruded semiconductor.

5. **METAL SCREEN**
Copper wire screen.

6. **SHEATH**
Polyethylene (PE).



APPLICATIONS:

Can be installed in air, trays and buried.
Abrasion and tear-resistant jacket. Easier sliding.
Halogen-free cable.

*Performance outside CPR scope.

APPROVALS: AENOR

PHYSICAL AND ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm²)	Diameter over insulation [1] (mm)	Overall diameter [1] (mm)	Weight [1] (kg/km)	Minimum bending radius [1] (mm)	Current ratings in air [2] (A)	Current ratings buried [2] (A)	DC conductor resistance at 20 °C (Ohm/km)	AC conductor resistance at 90 °C, 50 Hz (Ohm/km)	Inductance (mH/km)	Reactance at 50 Hz (Ohm/km)	Capaci-tance (µF/km)
12/20 (24) kV												
1310114	50	17,5	25,8	735	390	180	145	0,641	0,822	0,441	0,138	0,213
1310116	95	20,7	30,0	995	455	275	215	0,320	0,411	0,393	0,123	0,269
1310118	150	23,7	33,0	1 220	500	360	275	0,206	0,265	0,364	0,114	0,320
1310120	240	27,6	36,9	1 590	555	495	365	0,125	0,161	0,336	0,105	0,387
1310122	400	32,6	41,9	2 140	630	660	470	0,0778	0,102	0,311	0,098	0,472
18/30 (36) kV												
1311114	50	24,9	33,6	1 115	505	180	145	0,641	0,822	0,493	0,155	0,140
1311116	95	24,5	33,8	1 195	510	275	215	0,320	0,411	0,417	0,131	0,205
1311118	150	27,5	37,4	1 535	565	360	275	0,206	0,265	0,389	0,122	0,241
1311120	240	31,4	41,3	1 930	620	495	365	0,125	0,161	0,358	0,113	0,288
1311122	400	36,4	46,3	2 515	695	660	470	0,0778	0,102	0,330	0,104	0,347

[1] Values subject to variation depending on dimensional tolerances.

[2] Current ratings according to UNE 211435 Table A.5.2, three conductors trefoil, air 40 ºC, buried 25 ºC, 1 m, 1.5 Km/W.

HERSATENE class

HERSATENE®-FOC Class

RHZ1-OL (S) AL
12/20 (24) kV and 18/30 (36) kV

CPR
E_{ca}

STANDARDS:

CONSTRUCTION
ENDESA DND00100

FIRE PERFORMANCE*
IEC 60754-1
IEC 60754-2
IEC 61034
IEC 60332-1-2

CPR CLASSIFICATION :
DOP 0094 Rev.001
Class E_{ca}

CONSTRUCTION:

1. **CONDUCTOR**
Aluminium, semi-rigid class 2 to IEC 60228.

2. **CONDUCTOR SCREEN**
Extruded semiconductor.

3. **INSULATION**
Cross-linked polyethylene (XLPE).

4. **INSULATION SCREEN**
Extruded semiconductor.

5. **METAL SCREEN**
Copper wire screen longitudinally watertight with swelling tape.

6. **SHEATH**
LSOH compound.



APPLICATIONS:

Cables for power distribution for medium voltage outdoor, in ducts or directly buried installations.

Abrasion and tear-resistant jacket. Easier slide. Shielding with longitudinal tape against water penetration.

Flame retardant cable, halogen-free, low acidity and corrosiveness of gases and low opacity of smoke emitted during combustion.

*Performance outside CPR scope.

APPROVALS: AENOR

General Cable

PHYSICAL AND ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm^2)	Diameter over insulation [1] (mm)	Overall diameter [1] (mm)	Weight [1] (kg/km)	Minimum bending radius [1] (mm)	Current ratings in air [2] (A)	Current ratings buried [2] (A)	DC conductor resistance at 20 °C (Ohm/km)	AC conductor resistance at 90 °C, 50 Hz (Ohm/km)	Inductance (mH/km)	Reactance at 50 Hz (Ohm/km)	Capaci-tance (µF/km)
12/20 (24) kV												
7350114	50	19,9	28,2	905	425	170	140	0,641	0,822	0,458	0,144	0,162
7350116	95	23,1	31,8	1 160	480	255	205	0,320	0,411	0,405	0,127	0,202
7350118	150	26,1	35,4	1 450	535	335	260	0,206	0,265	0,378	0,119	0,239
7350120	240	30,0	39,3	1 845	590	455	345	0,125	0,161	0,348	0,109	0,286
7350122	400	35,0	44,3	2 425	665	610	445	0,0778	0,102	0,322	0,101	0,346
18/30 (36) kV												
7346116	95	28,1	37,4	1 480	565	255	205	0,320	0,411	0,437	0,137	0,155
7346118	150	31,1	40,4	1 750	610	335	260	0,206	0,265	0,405	0,127	0,181
7346120	240	35,0	44,3	2 170	665	455	345	0,125	0,161	0,372	0,117	0,214
7346122	400	40,0	49,5	2 800	745	610	445	0,0778	0,102	0,344	0,108	0,256

[1] Values subject to variation depending on dimensional tolerances.

[2] Current ratings according to UNE 211435 Table A.3.2, three conductors trefoil, air 40 ºC, buried 25 ºC, 1 m, 1.5 Km/W.

EXZHELLENT®

RHZ1-OL (AS) AL
12/20 (24) kV and 18/30 (36) kV

STANDARDS:

CONSTRUCTION
HD 620-10E
ENDESA

FIRE PERFORMANCE
IEC 60332-1-2
IEC 60332-3-23
IEC 60754-1
IEC 60754-2
IEC 61034



CONSTRUCTION:

1. CONDUCTOR
Aluminium, semi-rigid class 2 to IEC 60228.

2. CONDUCTOR SCREEN
Extruded semiconductor.

3. INSULATION
Cross-linked polyethylene (XLPE).

4. INSULATION SCREEN
Extruded semiconductor.

5. METAL SCREEN
Copper wire screen longitudinally watertight with swelling tape.

6. SHEATH
LSOH compound.



APPLICATIONS:

Cables for power distribution for high voltage installed in air.

Abrasion and tear-resistant jacket. Easier slide.

Low fire hazard cable: flame and fire retardant, halogen-free, low acidity and corrosiveness of gases and low opacity of smoke emitted during combustion.

Maximum conductor temperature 90°C.

APPROVALS: AENOR

PHYSICAL AND ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm²)	Diameter over insulation [1] (mm)	Overall diameter [1] (mm)	Weight [1] (kg/km)	Minimum bending radius [1] (mm)	Current ratings in air [2] (A)	Current ratings buried [2] (A)	DC conductor resistance at 20 °C (Ohm/km)	AC conductor resistance at 90 °C, 50 Hz (Ohm/km)	Inductance (mH/km)	Reactance at 50 Hz (Ohm/km)	Capaci-tance (µF/km)
12/20 (24) kV												
7351116	95	23,1	40,6	1 905	610	255	205	0,320	0,411	0,405	0,127	0,202
7351118	150	26,1	43,6	2 215	655	335	260	0,206	0,265	0,378	0,119	0,239
7351120	240	30,0	46,5	2 570	700	455	345	0,125	0,161	0,348	0,109	0,286
7351122	400	35,0	51,5	3 240	775	610	445	0,0778	0,102	0,322	0,101	0,346
7350122	400	35,0	44,3	2 425	665	610	445	0,0778	0,102	0,322	0,101	0,346
18/30 (36) kV												
7347116	95	28,1	44,6	2 175	670	255	205	0,320	0,411	0,472	0,148	0,155
7347118	150	31,1	47,6	2 495	715	335	260	0,206	0,265	0,437	0,137	0,181
7347120	240	35,0	51,5	2 985	775	455	345	0,125	0,161	0,402	0,126	0,214
7347122	400	40,0	55,5	3 560	835	610	445	0,0778	0,102	0,367	0,115	0,256

[1] Values subject to variation depending on dimensional tolerances.

[2] Current ratings according to UNE 211435 Table A.3.2, three conductors trefoil, air 40 ºC, buried 25 ºC, 1 m, 1.5 Km/W.

HERSATENE class

HERSATENE®-FOC Class

RHZ1-2OL (S) AL
12/20 (24) kV

CPR
E_{ca}

STANDARDS:

CONSTRUCTION
GN FENOSA 01434 9 SP V 0019

FIRE PERFORMANCE*
IEC 60332-1-2
IEC 60754-1
IEC 60754-2
IEC 61034

CPR CLASSIFICATION :
DOP 0094 Rev.001
Class E_{ca}

IN OPTION:

CONSTRUCTION:

1. **CONDUCTOR**
Aluminium, semi-rigid class 2 to IEC 60228.

2. **CONDUCTOR SCREEN**
Extruded semiconductor.

3. **INSULATION**
Cross-linked polyethylene (XLPE).

4. **INSULATION SCREEN**
Extruded semiconductor.

5. **METAL SCREEN**
Copper wire screen longitudinally watertight with swelling tape.

6. **SHEATH**
Polyethylene (PE).

In option : LS0H material



APPLICATIONS:

Cables for power distribution for medium voltage outdoor, in ducts or directly buried installations.

Abrasion and tear-resistant jacket. Easier slippage of the sheath.

Flame-retardant cable, halogen-free, low acidity and corrosiveness of gases and low opacity of smoke emitted during combustion.

Maximum conductor temperature 90°C.

*Performance outside CPR scope.

APPROVALS: AENOR

General Cable

PHYSICAL AND ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm^2)	Diameter over insulation [1] (mm)	Overall diameter [1] (mm)	Weight [1] (kg/km)	Minimum bending radius [1] (mm)	Current ratings in air [2] (A)	Current ratings buried [2] (A)	DC conductor resistance at 20 °C (Ohm/km)	AC conductor resistance at 90 °C, 50 Hz (Ohm/km)	Inductance (mH/km)	Reactance at 50 Hz (Ohm/km)	Capaci-tance (µF/km)
7358120	240	29,9	39,4	1 850	595	455	345	0,125	0,161	0,350	0,110	0,285

[1] Values subject to variation depending on dimensional tolerances.
[2] Current ratings according to UNE 211435 Table A.3.2, three conductors trefoil, air 40 ºC, buried 25 ºC, 1 m, 1.5 Km/W.

HERSATENE class

HERSATENE® Class

RH5Z1 AL

12/20 (24) kV and 18/30 (36) kV

CPR F_{ca}

STANDARDS:

CONSTRUCTION
UNE 211620
ENDESA

FIRE PERFORMANCE*
IEC 60754-1
IEC 60754-2
IEC 61034

CPR CLASSIFICATION:

DOP 0018 Rev.001
Class F_{ca}

CONSTRUCTION:

1. CONDUCTOR
Aluminium, semi-rigid class 2 to IEC 60228.

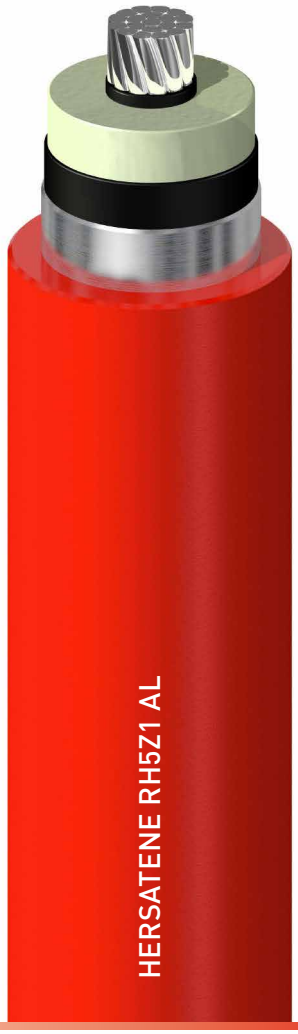
2. CONDUCTOR SCREEN
Extruded semiconductor.

3. INSULATION
Cross-linked polyethylene (XLPE).

4. INSULATION SCREEN
Extruded semiconductor.

5. METAL SCREEN
Longitudinal aluminium tape.

6. SHEATH
Polyethylene (PE).



APPLICATIONS:

Cables for power distribution in medium voltage installations in air, trunking or directly buried.

Reduced thickness of the insulation (electrical stress).

Sheath resistant to abrasion, tear and ultraviolet radiation.

Easy slippage during installation.

Halogen free cable.

Maximum conductor temperature 90 ºC.

*Performance outside CPR scope.

APPROVALS: AENOR

General Cable

PHYSICAL AND ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm^2)	Diameter over insulation [1] (mm)	Overall diameter [1] (mm)	Weight [1] (kg/km)	Minimum bending radius [1] (mm)	Current ratings in air [2] (A)	Current ratings buried [2] (A)	DC conductor resistance at 20 °C (Ohm/km)	AC conductor resistance at 90 °C, 50 Hz (Ohm/km)	Inductance (mH/km)	Reactance at 50 Hz (Ohm/km)	Capaci-tance (µF/km)
12/20 (24) kV												
7392114	50	18,7	27,2	670	410	170	140	0,641	0,822	0,451	0,142	0,175
7392116	95	21,9	30,4	890	460	255	205	0,320	0,411	0,396	0,124	0,220
7392118	150	24,9	33,4	1 120	505	335	260	0,206	0,265	0,367	0,115	0,261
7392120	240	28,8	37,3	1 490	560	455	345	0,125	0,161	0,338	0,106	0,314
7392122	400	33,8	42,3	2 045	635	610	445	0,0778	0,102	0,313	0,098	0,381
18/30 (36) kV												
7393114	50	23,4	31,9	875	480	170	140	0,641	0,822	0,483	0,152	0,135
7393116	95	26,6	35,1	1 125	530	255	205	0,320	0,411	0,424	0,133	0,166
7393118	150	29,6	38,1	1 375	575	335	260	0,206	0,265	0,393	0,123	0,194
7393120	240	33,5	42,0	1 770	635	455	345	0,125	0,161	0,362	0,114	0,230
7393122	400	38,5	47,0	2 365	710	610	445	0,0778	0,102	0,334	0,105	0,276

[1] Values subject to variation depending on dimensional tolerances.
[2] Current ratings according to UNE 211435 Table A.3.2, three conductors trefoil, air 40 °C, buried 25 °C, 1 m, 1.5 Km/W.

HERSATENE

HERSATENE®-FOC

RH5Z1 (S) AL
12/20 (24) kV and 18/30 (36) kV

STANDARDS:

CONSTRUCTION
UNE 211620
ENDESA

FIRE PERFORMANCE
IEC 60332-1-2
IEC 60754-1
IEC 60754-2
IEC 61034

CONSTRUCTION:

1. **CONDUCTOR**
Aluminium, semi-rigid class 2 to IEC 60228.

2. **CONDUCTOR SCREEN**
Extruded semiconductor.

3. **INSULATION**
Cross-linked polyethylene (XLPE).

4. **INSULATION SCREEN**
Extruded semiconductor.

5. **METAL SCREEN**
Longitudinal aluminium tape.

6. **SHEATH**
LSOH compound.



APPLICATIONS:

Cables for power distribution in medium voltage installations in air, trunking or directly buried.

Reduced thickness of the insulation (electrical stress).

Sheath resistant to abrasion, tear and ultraviolet radiation.

Easy slippage during installation.

Halogen free cable and flame retardant.

Maximum conductor temperature 90ºC.

APPROVALS: AENOR

General Cable

PHYSICAL AND ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm²)	Diameter over insulation [1] (mm)	Overall diameter [1] (mm)	Weight [1] (kg/km)	Minimum bending radius [1] (mm)	Current ratings in air [2] (A)	Current ratings buried [2] (A)	DC conductor resistance at 20 °C (Ohm/km)	AC conductor resistance at 90 °C, 50 Hz (Ohm/km)	Inductance (mH/km)	Reactance at 50 Hz (Ohm/km)	Capaci-tance (µF/km)
12/20 (24) kV												
7461114	50	18,7	27,2	745	410	170	140	0,641	0,822	0,451	0,142	0,175
7461116	95	21,9	30,4	975	460	255	205	0,320	0,411	0,396	0,124	0,220
7461118	150	24,9	33,4	1 215	505	335	260	0,206	0,265	0,367	0,115	0,261
7461120	240	28,8	37,3	1 595	560	455	345	0,123	0,161	0,338	0,106	0,314
7461122	400	33,8	42,3	2 165	635	610	445	0,0778	0,102	0,313	0,098	0,381
18/30 (36) kV												
7462114	50	23,4	31,9	965	480	170	140	0,641	0,822	0,483	0,152	0,135
7462116	95	26,6	35,1	1 225	530	255	205	0,320	0,411	0,424	0,133	0,166
7462118	150	29,6	38,1	1 485	575	335	260	0,206	0,265	0,393	0,123	0,194
7462120	240	33,5	42,0	1 895	635	455	345	0,123	0,161	0,362	0,114	0,230
7462122	400	38,5	47,0	2 500	710	610	445	0,0778	0,102	0,334	0,105	0,276

[1] Values subject to variation depending on dimensional tolerances.

[2] Current ratings according to UNE 211435 Table A.3.2, three conductors trefoil, air 40 ºC, buried 25 ºC, 1 m, 1.5 Km/W.

General Cable

HERSATENE®

AL or Cu/XLPE/WBCWS/PE (RHE-OL)
6,35/11 (12) kV and 19/33 (36) kV

STANDARDS:

CONSTRUCTION
BS 7870-4-10
INS 56.48.01

FIRE PERFORMANCE
IEC 60754-1
IEC 60754-2

CONSTRUCTION:

1. CONDUCTOR
Copper or waterblocked aluminium conductor, class 2 to IEC 60228.

2. CONDUCTOR SCREEN
Extruded semiconductor.

3. INSULATION
Cross-linked polyethylene (XLPE).

4. INSULATION SCREEN
Extruded semiconductor.

5. METAL SCREEN
Copper wire screen.
Longitudinally watertight with swelling tape.

6. SHEATH
Polyethylene (PE).

AS OPTION:
Triplex construction: 3 single core cables laid up.



APPLICATIONS:

Medium voltage power transmission and distribution networks.
Can be installed in air, trays and buried.
Minimum bending radius during installation=
20 x single core outer diameter.
Minimum admissible temperature range during
the installation : 0°C

Max admissible conductor temperature:
- Operating temperature: 90°C
- Core short circuit : 250°C

APPROVALS: SCOTTISH POWER

PHYSICAL AND ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm²)	Diameter over insulation (1) (mm)	Overall diameter (1) (mm)	Weight (1) (kg/km)	Minimum bending radius (1) (mm)	Current ratings in air (2) (A)	Current ratings buried (2) (A)	DC conductor resistance at 20 °C (Ohm/km)	AC conductor resistance at 90 °C, 50 Hz (Ohm/km)	Inductance (mH/km)	Reactance at 50 Hz (Ohm/km)	Capaci-tance (µF/km)
ALUMINIUM												
6,35/11 kV												
0377629	1x95	19,1	26,8	1 030	380	255	208	0,320	0,411	0,404	0,127	0,295
0377619	1x185	23,2	31,2	1 365	465	386	298	0,164	0,211	0,369	0,116	0,376
0377625	1x300	27,7	36,1	1 795	560	525	386	0,100	0,130	0,347	0,109	0,463
0377638	3x95	19,3	57,0	3 000	510	215	191	0,320	0,411	0,325	0,102	0,295
0377639	3x185	23,2	63,5	4 565	615	323	277	0,164	0,211	0,293	0,092	0,376
0377640	3x300	27,9	77,7	5 895	730	432	361	0,100	0,130	0,277	0,087	0,467
19/33 kV												
0382360	1x150	30,9	41,3	1 960	555	335	264	0,206	0,265	0,407	0,128	0,179
13151A0	1x240	34,9	45,0	2 385	630	457	342	0,125	0,161	0,376	0,118	0,213
13151A1	1x400	39,8	49,9	2 990	730	612	438	0,0778	0,102	0,347	0,109	0,254
0382369	1x800	52,4	62,8	4 840	970	-	-	0,0367	0,0540	0,312	0,098	0,358
COPPER												
6,35/11 kV												
0377630	1x300	28,4	36,8	3 660	570	669	490	0,0601	0,0790	0,309	0,097	0,477
0377631	1x500	35,4	44,1	5 605	710	-	-	0,0366	0,0508	0,293	0,092	0,610
0377632	1x630	39,0	48,0	6 990	785	-	-	0,0283	0,0416	0,283	0,089	0,681
19/33 kV												
0382372	1x500	44,6	54,9	6 535	820	-	-	0,0366	0,0508	0,337	0,106	0,293
0382381	1x630	48,2	58,6	7 965	895	-	-	0,0283	0,0416	0,325	0,102	0,323

(1) Values subject to variation depending on dimensional tolerances.
(2) Current ratings according to IEC 60502-2, in air at 40 °C, buried 25 °C, 1.0 m, 1.5 Km/W.

exZhellent

EXZHELLENT®

AL or Cu/XLPE/WBCWS/LSOH (RHDt-OL) 6,35/11 (12) kV and 19/33 (36) kV

STANDARDS:

CONSTRUCTION
BS 7870-4-10
INS 56.48.01

FIRE PERFORMANCE
IEC 60332-3-24
IEC 60332-1-2
IEC 60754-1
IEC 60754-2
IEC 61034



CONSTRUCTION:

1. CONDUCTOR
Copper or waterblocked aluminium conductor, class 2 to IEC 60228.

2. CONDUCTOR SCREEN
Extruded semiconductor.

3. INSULATION
Cross-linked polyethylene (XLPE).

4. INSULATION SCREEN
Extruded semiconductor.

5. METAL SCREEN
Copper wire screen
Longitudinally watertight with swelling tape.

6. SHEATH
LSOH compound.

AS OPTION:
Triplex construction: 3 single core cables laid up.



APPLICATIONS:

Medium voltage power transmission and distribution networks.
Suitable for public building installations.
Can be installed in air, trays and buried.

Minimum bending radius during installation=
20 x single core outer diameter.
Minimum admissible temperature range during
the installation: 0°C

Max admissible conductor temperature:
- Operating temperature:90°C
- Core short circuit : 250°C

APPROVALS: SCOTTISH POWER

PHYSICAL AND ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm²)	Diameter over insulation [1] (mm)	Overall diameter [1] (mm)	Weight [1] (kg/km)	Minimum bending radius [1] (mm)	Current ratings in air [2] (A)	Current ratings buried [2] (A)	DC conductor resistance at 20 °C (Ohm/km)	AC conductor resistance at 90 °C, 50 Hz (Ohm/km)	Inductance (mH/km)	Reactance at 50 Hz (Ohm/km)	Capaci-tance (µF/km)
ALUMINIUM												
6,35/11 kV												
0377628	1x95	19,1	30,8	1 405	420	255	208	0,320	0,411	0,433	0,136	0,295
0377627	1x185	23,2	33,4	1 660	485	386	298	0,164	0,211	0,382	0,120	0,376
0377626	1x300	27,7	37,5	2 080	570	525	386	0,100	0,130	0,353	0,111	0,463
0377646	3x95	19,3	58,3	3 905	520	215	191	0,320	0,411	0,325	0,102	0,299
0377645	3x185	23,2	66,2	5 300	610	323	277	0,164	0,211	0,293	0,092	0,376
0377642	3x300	27,9	77,4	7 100	730	432	361	0,100	0,130	0,277	0,087	0,467
19/33 kV												
0382383	1x150	30,9	48,3	2 855	625	335	264	0,206	0,265	0,442	0,139	0,179
0382384	1x240	34,9	52,3	3 365	705	457	342	0,125	0,161	0,407	0,128	0,213
0382385	1x400	39,8	56,2	3 940	790	612	438	0,0778	0,102	0,372	0,117	0,254
COPPER												
6,35/11 kV												
0377630	1x300	28,4	36,8	3 660	570	669	490	0,0601	0,0790	0,309	0,097	0,477
0377631	1x500	35,4	44,1	5 605	710	-	-	0,0366	0,0508	0,293	0,092	0,610
0377632	1x630	39,0	48,0	6 990	785	-	-	0,0283	0,0416	0,283	0,089	0,681
19/33 kV												
0382386	1x500	44,8	61,2	7 635	885	-	-	0,0366	0,0508	0,360	0,113	0,295
0382387	1x630	48,8	65,2	9 225	965	-	-	0,0283	0,0416	0,347	0,109	0,329

[1] Values subject to variation depending on dimensional tolerances.

[2] Current ratings according to IEC 60502-2, in air at 40 °C, buried 25 °C, 1.0 m, 1.5 Km/W.

HERSATENE®

AL or Cu/XLPE/WBCWS/PE (RHE-OL) 6,35/11 (12) kV and 19/33 (36) kV



STANDARDS:

CONSTRUCTION
BS 7870-4-10
WESTERN POWER EE SPEC: XX
WESTERN POWER EE SPEC: YY

FIRE PERFORMANCE
IEC 60754-1
IEC 60754-2

CONSTRUCTION:

1. CONDUCTOR
Waterblocked copper class 2 or aluminium class 1 to IEC 60228.

2. CONDUCTOR SCREEN
Extruded semiconductor.

3. INSULATION
Cross-linked polyethylene (XLPE).

4. INSULATION SCREEN
Extruded semiconductor.

5. METAL SCREEN
Copper wire screen.
Longitudinally watertight with swelling tape.

6. SHEATH
Polyethylene (PE).

Triplex construction: 3 single core cables laid.



APPLICATIONS:

Medium voltage power transmission and distribution networks.
Can be installed in air, trays and buried.
Minimum bending radius during installation=
20 x single core outer diameter.
Minimum admissible temperature range during the installation: 0°C.

Max admissible conductor temperature:
- Operating temperature: 90°C
- Core short circuit : 250°C

APPROVALS: WESTERN POWER

PHYSICAL AND ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm²)	Diameter over insulation [1] (mm)	Overall diameter [1] (mm)	Weight [1] (kg/km)	Minimum bending radius [1] (mm)	Current ratings in air [2] (A)	Current ratings buried [2] (A)	DC conductor resistance at 20 °C (Ohm/km)	AC conductor resistance at 90 °C, 50 Hz (Ohm/km)	Inductance (mH/km)	Reactance at 50 Hz (Ohm/km)	Capaci-tance (µF/km)
ALUMINIUM												
6,35/11 kV												
0393497	1x95	19,1	28,1	1 080	380	255	208	0,320	0,411	0,293	0,130	0,295
0393499	3x1x95	19,1	60,5	3 210	535	255	208	0,320	0,411	0,423	0,133	0,295
0393500	3x1x185	23,6	70,9	4 380	650	386	298	0,164	0,211	0,382	0,120	0,384
0393501	3x1x300	27,7	80,6	5 605	755	525	386	0,100	0,130	0,360	0,113	0,463
COPPER												
6,35/11 kV												
0393503	3x1x300	30,0	86,9	11 665	815	669	490	0,0601	0,0790	0,334	0,105	0,507
0393504	3x1x400	32,6	93,6	14 175	885	769	549	0,0470	0,0631	0,325	0,102	0,557
0393505	1x630	39,6	49,8	7 210	810	-	-	0,0283	0,0416	0,293	0,092	0,693
19/33 kV												
0393507	1x185	33,1	43,9	3 135	600	494	382	0,0991	0,128	0,293	0,125	0,198
0393508	1x300	38,8	49,9	4 515	710	669	490	0,0601	0,0790	0,372	0,117	0,245
0393509	1x400	41,8	43,1	5 405	775	769	549	0,0470	0,0631	0,360	0,113	0,270
0393510	1x630	48,8	60,6	8 055	920	-	-	0,0283	0,0416	0,331	0,104	0,329

[1] Values subject to variation depending on dimensional tolerances.

[2] Current ratings according to IEC 60502-2, in air at 40 °C, buried 25 °C, 1.0 m, 1.5 Km/W.

VULPREN®

AL or Cu/EPR/CWS/PE (DHE)
6,35/11 (12) kV and 19/33 (36) kV

STANDARDS:

CONSTRUCTION
BS 7870-4-10
WESTERN POWER EE SPEC: XX
WESTERN POWER EE SPEC: YY

FIRE PERFORMANCE
IEC 60754-1
IEC 60754-2

CONSTRUCTION:

1. CONDUCTOR
Waterblocked copper class 2 or aluminium class 1 to IEC 60228.

2. CONDUCTOR SCREEN
Extruded semiconductor.

3. INSULATION
Ethylene polyethylene Rubber (EPR).

4. INSULATION SCREEN
Extruded semiconductor.

5. METAL SCREEN
Copper wire screen.

6. SHEATH
Polyethylene (PE).

Triplex construction: 3 single core cables laid



APPLICATIONS:

Medium voltage power transmission and distribution networks.
Can be installed in air, trays and buried.
Minimum bending radius during installation=
20 x single core outer diameter.
Minimum admissible temperature range during the installation : 0°C.

Max admissible conductor temperature:
- Operating temperature:90°C
- Core short circuit : 250°C

APPROVALS: WESTERN POWER

PHYSICAL AND ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm²)	Diameter over insulation [1] (mm)	Overall diameter [1] (mm)	Weight [1] (kg/km)	Minimum bending radius [1] (mm)	Current ratings in air [2] (A)	Current ratings buried [2] (A)	DC conductor resistance at 20 °C (Ohm/km)	AC conductor resistance at 90 °C, 50 Hz (Ohm/km)	Inductance (mH/km)	Reactance at 50 Hz (Ohm/km)	Capaci-tance (µF/km)
ALUMINIUM												
6,35/11 kV												
0319634	1x95	19,1	27,4	1 100	385	242	204	0,320	0,411	0,407	0,128	0,327
0319650	3x1x95	19,1	58,6	3 265	520	242	204	0,320	0,411	0,414	0,130	0,326
0319655	3x1x185	23,6	68,9	4 450	635	369	295	0,164	0,211	0,376	0,118	0,425
0319636	3x1x300	27,7	78,6	5 690	740	506	383	0,100	0,130	0,293	0,111	0,513
COPPER												
6,35/11 kV												
0319654	3x1x300	30,0	84,1	11 755	795	648	490	0,0601	0,0790	0,293	0,103	0,561
0393487	3x1x400	32,6	90,1	14 245	860	751	556	0,0470	0,0631	0,318	0,100	0,616
0319653	1x630	39,6	49,3	7 280	805	-	-	0,0283	0,0416	0,290	0,091	0,767
19/33 kV												
0320784	1x185	33,1	42,4	3 230	585	745	379	0,0991	0,128	0,293	0,123	0,219
0393489	1x300	38,8	48,4	4 640	700	648	490	0,0601	0,0790	0,366	0,115	0,271
0320799	1x400	41,8	51,7	5 540	760	751	556	0,0470	0,0631	0,353	0,111	0,299
0320801	1x630	48,8	59,1	8 220	905	-	-	0,0283	0,0416	0,328	0,103	0,364

[1] Values subject to variation depending on dimensional tolerances.

[2] Current ratings according to IEC 60502-2, in air at 40 °C, buried 25 °C, 1.0 m, 1.5 Km/W.


EXIT

2

MV CABLES FOR SPECIAL APPLICATIONS

2.1 NUCLEAR
ULTROL Cu or AL/XLPE/CWS/LSOH NUCLEAR 78
2.2 WIND POWER GENERATORS
EXZHELLENT® DSNA – WIND POWER GENERATORS 80
2.3 AIRFIELD LIGHTING
HERSATENE® Class Cu/XLPE/CTS/XLPE – AIRFIELD LIGHTING 82
2.4 PUBLIC LIGHTING
VINYLEC PREMIUM 84
2.5 INDUSTRIAL
HERSATENE® Cu or AL/XLPE/CTS/PVC 86
HERSATENE® Cu or AL/XLPE/CTS/PVC or PVC/STA or SWA/PVC 102

General Cable

ULTROL

Cu or AL/XLPE/CWS/LSOH - NUCLEAR - Category K3
6/10 (12) kV and 8.7/15 (17.5) kV

STANDARDS:

CONSTRUCTION
CST 74C 068

FIRE PERFORMANCE
IEC 60-332-3-23
NFC 32-070 CAT. C1
IEC 60754-1
IEC 60754-2
IEC 61034-2



CONSTRUCTION:

1. **CONDUCTOR**
Stranded Aluminium Class 2 to IEC 60228.

2. **CONDUCTOR SCREEN**
Extruded semiconductor.

3. **INSULATION**
Cross-linked polyethylene (XLPE).

4. **INSULATION SCREEN**
Extruded semiconductor.

5. **METAL SCREEN**
Copper tape screen.

6. **SHEATH**
Black LSOH compound.



APPLICATIONS:

Medium voltage cables for nuclear applications.
Can be installed in air, trays or cable duct.

Minimum bending radius during installation=
20 x single core outer diameter.
Minimum bending radius after installation=
13 x single core outer diameter.

Max admissible conductor temperature:
- perating temperature: 90°C
- Core short circuit : 250°C

APPROVALS: SEPTEN

PHYSICAL AND ELECTRICAL CHARACTERISTICS:

Section (mm²)	Overall diameter (mm)	Weight (kg/km)	Minimum bending radius (mm)		Permissible intensity		DC conductor resistance at 20°C (Ω/km)	AC conductor resistance at 90°C (Ω/km)	Inductance (mH/km)	Capacitance (µF/km)
			After installation	During the drawing phase	Cable in open air	Buried cable				
6/10 (12) kV										
35	29,9	1 050	390	598	147	149	0,868	1,113	0,474	0,215
50	31	1 150	400	620	185	175	0,641	0,822	0,452	0,237
95	34,1	1 400	440	682	266	252	0,32	0,411	0,406	0,303
150	32,6	1 200	420	652	360	325	0,206	0,265	0,349	0,361
185	34,9	1 550	450	698	417	370	0,164	0,211	0,332	0,408
240	37	1 750	480	740	490	428	0,125	0,161	0,32	0,452
300	39,2	2 000	510	784	567	485	0,1	0,13	0,309	0,499
400	42,5	2 350	550	850	662	554	0,078	0,102	0,297	0,561
500	45,7	2 800	590	914	771	631	0,06	0,08	0,286	0,622
630	48,7	3 200	630	974	897	720	0,047	0,064	0,276	0,703
8,7/15 (18) kV										
35	32,1	1 200	420	642	147	149	0,868	1,113	0,49	0,177
50	33,1	1 300	430	662	185	175	0,641	0,822	0,467	0,195
95	36,3	1 550	470	726	266	252	0,32	0,411	0,419	0,246
150	34,8	1 300	450	696	360	325	0,206	0,265	0,362	0,29
185	37,1	1 700	480	742	417	370	0,164	0,211	0,345	0,326
240	39,2	1 900	510	784	490	428	0,125	0,161	0,332	0,36
300	41,4	2 150	540	828	567	485	0,1	0,13	0,32	0,396
400	44,7	2 500	580	894	662	554	0,078	0,102	0,308	0,444
500	47,9	2 950	620	958	771	631	0,06	0,08	0,292	0,491
630	50,9	3 400	660	1018	897	720	0,047	0,064	0,28	0,553

Installation in open air:
- A single circuit without thermal and electrical proximity
- Air ambient temperature: 30°C
- Away from sun's rays

Buried installation:
- A single circuit without thermal and electrical proximity
- Ground temperature: 20°C
- Ground thermal resistivity: 1 K.m/W
- Laying depth: 0.8m

EXZHELLENT®

DSNA - WIND POWER GENERATORS
12/20 (24) kV and 18/30 (36) kV

STANDARDS:

CONSTRUCTION
CUSTOMER TAILORE

FIRE PERFORMANCE
IEC 60332-3-24
IEC 60332-1-2
IEC 60754-1
IEC 60754-2
IEC 61034



CONSTRUCTION:

1. CONDUCTOR
Flexible copper class 5.

2. CONDUCTOR SCREEN
Extruded semiconductor.

3. INSULATION
Ethylene Polyethylene Rubber (EPR).

4. INSULATION SCREEN
Extruded semiconductor.

5. 3 EARTHING CONDUCTORS
Cu class 5 covered with a semiconducting layer.
Assembled with central extruded filler.

6. SHEATH
LSOH Elastomer compound.



APPLICATIONS:

Medium voltage power cable withstanding torsional stresses.
UV resistant upon request.

Minimum cable temperature after installation: -40°C

Max admissible conductor temperature:
- Operating temperature: 90°C
- Core short circuit : 250°C

PHYSICAL AND ELECTRICAL CHARACTERISTICS:

General Cable Code	Cross section (mm²)	Diameter over insulation [1] (mm)	Overall diameter [1] (mm)	Weight [1] (kg/km)	Minimum bending radius [1] (mm)	Current ratings in air [2] (A)	DC conductor resistance at 20 °C (Ohm/km)	AC conductor resistance at 90 °C, 50 Hz (Ohm/km)	Inductance (mH/km)	Reactance at 50 Hz (Ohm/km)	Capacitance (µF/km)
12/20 (24) kV											
71773A0	3x25 + 3x10	18,0	54,2	4 160	453	123	0,780	0,927	0,442	0,139	0,132
71773A1	3x70 + 3x16	22,3	63,7	6 575	382	221	0,272	0,342	0,563	0,177	0,117
18/30 (36) kV											
71783A1	3x35 + 3x10	26,3	70,8	6 715	587	149	0,554	0,668	0,420	0,132	0,117

[1] Values subject to variation depending on dimensional tolerances.
[2] Current ratings according to IEC 60502-2, in air at 40 °C.
Other voltages and cross-sections on request.

HERSATENE®Class

Cu/XLPE/CTS/XLPE - AIRFIELD LIGHTING
6/10 (12) kV

CPR F_{ca}

STANDARDS:

NF C 33-225

As option:

CPR CLASSIFICATION :

DOP 0109 Rev.002
Class F_{ca}

CONSTRUCTION:

1. **CONDUCTOR**
Copper Class 2 to IEC 60228.

2. **CONDUCTOR SCREEN**
Extruded semiconductor.

3. **INSULATION**
Cross-linked polyethylene (XLPE).

4. **INSULATION SCREEN**
Extruded semiconductor.

5. **METAL SCREEN**
Copper tape(s) helically applied.

6. **OUTER SHEATH**
Cross-linked polyethylene (XLPE).



APPLICATIONS:

Cables for primary airfield lighting circuits.

Maximum admissible conductor temperature:
Operating temperature: 90°C
Core short circuit: 250°C

PHYSICAL AND ELECTRICAL CHARACTERISTICS:

Cross section (mm²)	Diameter over insulation¹ (mm)	Overall diameter (mm)	Weight (kg/km)	Current ratings buried (A)	Current ratings in air (A)	Voltage drop (cos φ = 0.8, V/A.km)
6	11,1	15,7	280	83	82	6,48

Values subject to variation depending on dimensional tolerances.

Operating conditions

- Ground temperature = 20°C
- Air temperature = 30°C
- Ground thermal resistivity = 1 Km/W

VINYLEC PREMIUM

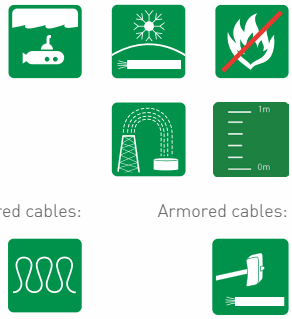
Cu/PVC/PVC/CTS/PVC or Cu/PVC/PVC/CTS/PVC/STA/PVC 6/6 (7.2) KV

STANDARDS:

CONSTRUCTION
NF C 33-220

FIRE PERFORMANCE
IEC 60332-1 / C2
According to NF C 32-070

WATER IMMERSION:
AD8 according to NF C 13-200
AD7 version available on request



CONSTRUCTION:

1. CONDUCTOR
Copper or Aluminium Class 2 to IEC 60228.

2. INSULATION
Insulating envelope: Polyvinyl Chloride (PVC).

3. BELTED SHEAT
Assembly of the 3 conductors under a belt sheath.

4. SCREEN
Copper tape helically applied (lead sheath as option).

In case of armored cables:

- Internal separation sheath,
- Armor made of 2 steel tapes.

5. OUTER SHEATH
Polyvinyl Chloride (PVC) improved resistant to hydrocarbons and in saline atmosphere.

Core identification: white, red and black. Others identification modes on request.



APPLICATIONS:

For outdoor lighting in residential and industrial areas, roads, highways, airports, ports, power stations, monuments, sports complexes, etc.

Maximum admissible conductor temperature:
- Operating temperature: 70°C
- Core short circuit: 160 °C

PHYSICAL AND ELECTRICAL CHARACTERISTICS:

Tripolar cable with non-radial field belt Rated Voltage 6/6 (7.2) kV								
Diameter (Indicative)			Weight		Cross Section	Intensity (Permissible)		
Over belt sheat	Outer		Cu			Buried cable	Cable installed on shelves	Pressure drop by A and by km (Cos φ= 0,8))
	No armored	Armored	Non armored	Armored				
mm			kg		mm²	A		V
24,0	30,0	33,5	1 200	1 650	10	70	62	3,15
24,0	29,5	33,5	1 300	1 750	16	94	81	2,04
24,0	32,5	36,0	1 700	2 150	25	120	105	1,32

Values subject to variation depending on dimensional tolerances.

The current ratings are calculated for a 3 phase system
Sector-shaped conductor for sections 50 mm²

Operating conditions
- Ground temperature = 20°C
- Air temperature = 30°C
- Ground thermal resistivity = 1 Km/W

Installation conditions
- They must respect standards NF C 17-200 and NF C 13-200.

HERSATENE®

Cu or AL/XLPE/CTS/PVC

3.6/6 (7.2) kV, 6/10 (12) kV, 8.7/15 (17.5) kV, 12/20 (24) kV, 18/30 (36) kV

STANDARDS:

CONSTRUCTION
NF C 33-220
CEI 60 502-2

FIRE PERFORMANCE
IEC 60332-1-2

As option:



CONSTRUCTION:

1. CONDUCTOR
Copper or Aluminium Class 2 to IEC 60228.

2. CONDUCTOR SCREEN
Extruded semiconductor.

3. INSULATION
Cross-linked polyethylene (XLPE).

4. INSULATION SCREEN
Extruded semiconductor.

5. METAL SCREEN
Copper tape(s) helically applied.

6. OUTER SHEATH
Polyvinyl Chloride (PVC).

As option:
- Bundle with messenger for aerial applications
- Armor for underground applications
- Tripolar



APPLICATIONS:

Cables for power supply to industry, refineries and public lighting.

Minimum bending radius during installation = 20 x single core outer diameter.
Minimum bending radius after installation = 13 x single core outer diameter.
Admissible temperature range during the installation: – 10°C to + 50°C

Maximum admissible conductor temperature:
- Operating temperature: 90°C
- Core short circuit: 250°C

PHYSICAL CHARACTERISTICS:

6/10 (12) kV

COPPER

Cross section (mm²)	Diameter over insulation (mm)	Overall diameter (mm)	Weight (kg/km)	Minimum bending radius after installation (mm)	Minimum bending radius during installation (mm)	Maximum tensile strength (daN)
25	13,80	20,0	600	260	400	125
35	14,70	21,0	710	273	420	175
50	16,10	22,5	870	292.5	450	250
70	18,10	24,5	1 150	318.5	490	350
95	19,65	26,5	1 400	344.5	530	475
120	21,10	27,5	1 650	357.5	550	600
150	22,5	29,0	1 950	377	580	750
185	24,35	31,0	2 350	403	620	925
240	26,50	33,5	2 800	435.5	670	1 200
300	28,75	34,0	3 500	442	680	1 500
400	32,25	39,5	4 350	513.5	790	2 000
500	35,60	43,0	5 500	559	860	2 500
630	40,60	49,0	7 100	637	980	3 150
800	44,80	53,5	8 800	695.5	1 070	4 000
1 000	51,00	60,0	11 200	780	1 200	5 000
1 200	52,70	62,0	12 700	806	1 240	6 000

ALUMINIUM

25	14,56	21,0	475	273	420	75
35	15,51	22,0	530	286	440	105
50	16,78	23,5	610	305.5	470	150
70	18,66	25,5	720	331.5	510	210
95	19,96	26,5	830	344.5	530	285
120	21,86	28,5	950	370.5	570	360
150	22,76	29,5	1 050	383.5	590	450
185	25,51	32,5	1 250	422.5	650	555
240	27,16	34,0	1 450	442	680	720
300	29,36	36,5	1 700	474.5	730	900
400	32,16	39,5	2 000	513.5	790	1 200
500	35,66	43,5	2 500	565.5	870	1 500
630	39,41	47,5	3 000	617.5	950	1 890
800	44,56	53,5	3 750	695.5	1 070	2 400
1 000	49,56	58,5	4 550	760.5	1 170	3 000
1 200	52,76	62,0	5 200	806	1 240	3 600

Values subject to variation depending on dimensional tolerances.

General Cable

HERSATENE®

Cu or AL/XLPE/CTS/PVC

3.6/6 (7.2) kV, 6/10 (12) kV, 8.7/15 (17.5) kV, 12/20 (24) kV, 18/30 (36) kV

PHYSICAL CHARACTERISTICS:

8.7/15 (17.5) kV

COPPER

Cross section (mm²)	Diameter over insulation (mm)	Overall diameter (mm)	Weight (kg/km)	Minimum bending radius after installation (mm)	Minimum bending radius during installation (mm)	Maximum tensile strength (daN)
25	16,00	22,5	680	292.5	450	125
35	16,90	23,5	800	305.5	470	175
50	18,30	25,0	960	325	500	250
70	20,30	27,0	1 250	351	540	350
95	21,85	28,5	1 500	370.5	570	475
120	23,30	30,0	1 800	390	600	600
150	24,70	31,5	2 050	409.5	630	750
185	26,55	33,5	2 450	435.5	670	925
240	28,70	36,0	3 000	468	720	1 200
300	30,95	38,0	3 650	494	760	1 500
400	34,45	42,0	4 500	546	840	2 000
500	37,80	45,5	5 600	591.5	910	2 500
630	42,80	51,5	7 250	669.5	1030	3 150
800	47,00	57,0	9 100	57	1140	4 000
1 000	53,20	62,5	11 450	812.5	1250	5 000
1 200	56,90	64,5	12 900	838.5	1290	6 000

ALUMINIUM

25	16,76	23,0	560	299	460	75
35	17,71	24,0	620	312	480	105
50	18,98	25,5	700	331.5	510	150
70	20,86	27,5	820	357.5	550	210
95	22,16	29,0	930	377	580	285
120	24,06	31,0	1 100	403	620	360
150	24,96	32,0	1 200	416	640	450
185	27,71	35,0	1 400	455	700	555
240	29,36	36,5	1 600	474.5	730	720
300	31,56	39,0	1 850	507	780	900
400	34,36	42,0	2 200	546	840	1 200
500	37,86	45,5	2 650	591.5	910	1 500
630	41,61	49,5	3 100	643.5	990	1 890
800	46,76	56,0	3 950	728	1 120	2 400
1 000	51,76	61,0	4 800	793	1 220	3 000
1 200	54,96	64,5	5 400	838.5	1 290	3 600

General Cable

Values subject to variation depending on dimensional tolerances.

PHYSICAL CHARACTERISTICS:

Cross section (mm²)	Diameter over insulation (mm)	Overall diameter (mm)	Weight (kg/km)	Minimum bending radius after installation (mm)	Minimum bending radius during installation (mm)	Maximum tensile strength (daN)
12/20 (24) kV						
COPPER						
25	18,80	25,0	800	325	500	125
35	18,90	25,5	880	331.5	510	175
50	20,30	27,0	1 050	351	540	250
70	22,30	29,0	1 300	377	580	350
95	23,85	30,5	1 600	396.5	610	475
120	25,30	32,0	1 900	416	640	600
150	26,70	33,5	2 200	435.5	670	750
185	28,55	36,0	2 600	468	720	925
240	30,70	38,0	3 100	494	760	1 200
300	32,95	40,5	3 800	526.5	810	1 500
400	36,45	44,0	4 650	572	880	2 000
500	39,80	47,5	5 800	617.5	950	2 500
630	44,80	53,5	7 500	695.5	1 070	3 150
800	49,00	58,0	9 200	754	1 160	4 000
1 000	55,20	64,5	11 700	838.5	1 290	5 000
1 200	56,90	67,5	13 000	877.5	1 350	6 000
ALUMINIUM						
25	19,56	26,0	680	338	520	75
35	19,71	26,0	700	338	520	105
50	20,98	27,5	790	357.5	550	150
70	22,86	29,5	910	383.5	590	210
95	24,16	31,0	1 050	403	620	285
120	26,06	33,0	1 200	429	660	360
150	26,96	34,0	1 300	442	680	450
185	29,71	37,0	1 500	481	740	555
240	31,36	39,5	1 800	513.5	790	720
300	33,56	41,0	1 200	533	820	900
400	36,36	44,0	2 350	572	880	1 200
500	39,86	47,5	2 800	617.5	950	1 500
630	43,61	51,5	3 250	669.5	1 030	1 890
800	48,76	58,0	4 150	754	1 160	2 400
1 000	53,76	63,0	5 000	819	1 260	3 000
1 200	56,96	66,5	5 700	864.5	1 330	3 600

Values subject to variation depending on dimensional tolerances.

General Cable

HERSATENE®

Cu or AL/XLPE/CTS/PVC

3.6/6 (7.2) kV, 6/10 (12) kV, 8.7/15 (17.5) kV, 12/20 (24) kV, 18/30 (36) kV

PHYSICAL CHARACTERISTICS:

Cross section (mm²)	Diameter over insulation (mm)	Overall diameter (mm)	Weight (kg/km)	Minimum bending radius after installation (mm)	Minimum bending radius during installation (mm)	Maximum tensile strength (daN)
18/30 (36) kV						
COPPER						
50	25,30	32,5	1 350	422.5	650	250
70	27,30	34,5	1 600	448.5	690	350
95	28,85	36,0	1 900	468	720	475
120	30,30	37,50	2 200	487.5	750	600
150	31,70	39,0	2 500	507	780	750
185	33,55	41,0	2 950	533	820	925
240	35,70	43,5	3 500	565.5	870	1 200
300	37,95	46,0	4150	598	920	1 500
400	41,45	49,5	5 100	643.5	990	2 000
500	44,80	53,0	6 200	689	1 060	2 500
630	49,80	59,0	7 900	767	1 180	3 150
800	54,00	63,5	9 700	825.5	1 270	4 000
1 000	60,20	70,0	12 300	910	1 400	5 000
1 200	61,90	72,0	13 800	936	1 440	6 000
ALUMINIUM						
50	25,98	33,0	1100	429	660	150
70	27,86	35,0	1250	455	700	210
95	29,16	36,5	1350	474.5	730	285
120	31,06	38,5	1500	500.5	770	360
150	31,63	39,0	1650	507	780	450
185	36,45	44,0	1950	572	890	555
240	36,36	44,0	2100	572	890	720
300	38,56	46,5	2 400	604.5	930	900
400	41,36	49,5	2 750	643.5	990	1 200
500	44,86	53,0	3 200	689	1 060	1 500
630	48,61	57,0	3 750	741	1 140	1 890
800	53,76	63,0	4 650	819	1 260	2 400
1 000	58,76	68,5	5 600	890.5	1 370	3 000
1 200	61,96	72,0	6 300	936	1 440	3 600

General Cable

Values subject to variation depending on dimensional tolerances.

MAXIMUM CURRENT RATING:

Cross-Section (mm²)	Permanent current (kA)				Short circuit current, 1s (kA)		Voltage drop ΔU (cos φ)	
	Directly buried		In air		Conductor	Screen	0,8	0,9
	Trefoil	Flat	Trefoil	Flat				
COPPER								
6/10 (12) kV								
25	161	165	157	161	3,55	1,68	1,427	1,549
35	192	197	190	195	5,00	1,68	1,421	1,544
50	225	231	233	244	7,14	1,68	0,814	0,864
70	276	283	292	304	10,00	1,68	0,595	0,621
95	330	338	356	369	13,57	1,68	0,458	0,469
120	375	383	409	423	17,15	1,68	0,382	0,386
150	420	430	465	478	21,43	1,68	0,328	0,326
185	474	484	533	549	26,43	1,68	0,281	0,275
240	549	559	630	646	34, 29	1,68	0,237	0,226
300	619	623	724	735	42,86	1,68	0,210	0,196
400	698	703	836	838	57,15	1,68	0,182	0,167
500	786	785	959	958	71,44	1,68	0,162	0,146
630	887	886	1 108	1 108	90,01	1,68	0,149	0,131
800	980	970	1 255	1 244	114,30	1,68	0,137	0,119
1 000	1 063	1 042	1 390	1 366	142,87	1,68	0,127	0,109
1 200	1 117	1 087	1 480	1 445	178,02	1,68	0,123	0,105

Values subject to variation depending on dimensional tolerances.

The current ratings are calculated for a 3 phase system

Operating conditions

- Ground temperature = 20°C
- Air temperature = 30°C
- Ground thermal resistivity = 1 Km/W

General Cable

HERSATENE®

Cu or AL/XLPE/CTS/PVC

3.6/6 (7.2) kV, 6/10 (12) kV, 8.7/15 (17.5) kV, 12/20 (24) kV, 18/30 (36) kV

MAXIMUM CURRENT RATING:

Cross-Section (mm²)	Permanent current (kA)				Short circuit current, 1s (kA)		Voltage drop ΔU (cos φ)	
	Directly buried		In air		Conductor	Screen	0,8	0,9
	Trefoil	Flat	Trefoil	Flat				
COPPER								
8,7/15 (17.5) kV								
25	161	165	157	161	3,57	1,68	1,434	1,554
35	192	197	190	195	5,00	1,68	1,068	1,145
50	225	231	233	244	7,14	1,68	0,820	0,868
70	276	283	292	304	10,00	1,68	0,600	0,625
95	330	338	356	369	13,57	1,68	0,462	0,472
120	375	383	409	423	17,15	1,68	0,388	0,390
150	420	430	465	478	21,43	1,68	0,348	0,341
185	474	484	533	549	26,43	1,68	0,286	0,278
240	549	559	630	646	34,29	1,68	0,241	0,229
300	619	623	724	735	42,86	1,68	0,211	0,197
400	698	703	836	838	57,15	1,68	0,185	0,169
500	786	785	959	958	71,44	1,68	0,165	0,148
630	887	886	1 108	1 108	90,00	1,68	0,151	0,133
800	980	970	1 255	1 244	114,30	1,68	0,140	0,121
1 000	1 063	1 042	1 390	1 366	142,87	1,68	0,129	0,111
1 200	1 117	1 087	1 480	1 445	171,45	1,68	0,125	0,106

Values subject to variation depending on dimensional tolerances.

The current ratings are calculated for a 3 phase system

- Ground temperature = 20°C
- Air temperature = 30°C
- Ground thermal resistivity = 1 Km/W

MAXIMUM CURRENT RATING:

Cross-Section (mm²)	Permanent current (kA)				Short circuit current, 1s (kA)		Voltage drop ΔU (cos φ)	
	Directly buried		In air		Conductor	Screen	0,8	0,9
	Trefoil	Flat	Trefoil	Flat				
25	225	231	233	244	7,14	1,68	1,442	1,559
35	276	283	292	304	10,00	1,68	1,074	1,149
50	330	338	356	369	13,57	1,68	0,825	0,872
70	375	383	409	423	17,15	1,68	0,605	0,629
95	420	430	465	478	21,43	1,68	0,467	0,476
120	474	484	533	549	26,43	1,68	0,392	0,393
150	549	559	630	646	34,29	1,68	0,338	0,333
185	619	623	724	735	42,86	1,68	0,290	0,281
240	698	703	836	838	57,15	1,68	0,244	0,232
300	786	785	959	958	71,44	1,68	0,215	0,199
400	887	886	1 108	1 108	90,00	1,68	0,188	0,171
500	980	970	1 255	1 244	114,30	1,68	0,168	0,150
630	1 063	1 042	1 390	1 366	142,87	1,68	0,153	0,134
800	1 117	1 087	1 480	1 445	171,45	1,68	0,141	0,121
1000	1 063	1 042	1 390	1 366	142,87	1,68	0,131	0,112
1200	1 117	1 087	1 480	1 445	171,45	1,68	0,128	0,108

Values subject to variation depending on dimensional tolerances.

The current ratings are calculated for a 3 phase system

Operating conditions

- Ground temperature = 20°C
- Air temperature = 30°C
- Ground thermal resistivity = 1 Km/W

HERSATENE®

Cu or AL/XLPE/CTS/PVC

3.6/6 (7.2) kV, 6/10 (12) kV, 8.7/15 (17.5) kV, 12/20 (24) kV, 18/30 (36) kV

MAXIMUM CURRENT RATING:

Cross-Section (mm²)	Permanent current (kA)				Short circuit current, 1s (kA)		Voltage drop ΔU (cos φ)	
	Directly buried		In air		Conductor	Screen	0,8	0,9
	Trefoil	Flat	Trefoil	Flat				
COPPER								
18/30 (36) kV								
50	225	231	233	244	7,14	1,68	0,837	0,881
70	276	283	292	304	10,00	1,68	0,616	0,637
95	330	338	356	369	13,57	1,68	0,478	0,483
120	375	383	409	423	17,15	1,68	0,402	0,400
150	420	430	465	478	21,43	1,68	0,347	0,340
185	474	484	533	549	26,43	1,68	0,299	0,287
240	549	559	630	646	34,29	1,68	0,253	0,238
300	619	623	724	735	42,86	1,68	0,222	0,205
400	698	703	836	838	57,15	1,68	0,195	0,176
500	786	785	959	958	71,44	1,68	0,174	0,154
630	887	886	1 108	1 108	90,00	1,68	0,159	0,138
800	980	970	1 255	1 244	114,30	1,68	0,146	0,125
1000	1 063	1 042	1 390	1 366	142,87	1,68	0,136	0,115
1200	1 117	1 087	1 480	1 445	171,45	1,68	0,131	0,110

Values subject to variation depending on dimensional tolerances.

The current ratings are calculated for a 3 phase system

Operating conditions

- Ground temperature = 20°C
- Air temperature = 30°C
- Ground thermal resistivity = 1 Km/W

ELECTRICAL CHARACTERISTICS:

CHARACTERISTICS	Cross-Section (mm²)										
	25	50	95	150	240	300	400	630	800	1 000	1 200
COPPER											
6/10 (12) kV											
DC conductor resistance at 20 °C (Ω / km)	0,727	0,387	0,193	0,124	0,075	0,060	0,047	0,028	0,022	0,018	0,015
AC conductor resistance, 50 Hz, at 90 °C (Ω / km)	0,927	0,493	0,247	0,159	0,098	0,079	0,063	0,042	0,035	0,030	0,028
Inductance (mH / km)	0,436	0,398	0,357	0,329	0,308	0,308	0,288	0,279	0,271	0,261	0,260
Capacitance (µF / km)	0,196	0,243	0,315	0,373	0,453	0,453	0,568	0,734	0,817	0,941	0,975
8,7/15 (18) kV											
DC conductor resistance at 20 °C (Ω / km)	0,727	0,387	0,193	0,124	0,075	0,060	0,047	0,028	0,022	0,018	0,015
AC conductor resistance, 50 Hz, at 90 °C (Ω / km)	0,927	0,494	0,247	0,159	0,098	0,079	0,063	0,041	0,034	0,030	0,027
Inductance (mH / km)	0,457	0,417	0,369	0,392	0,322	0,311	0,299	0,288	0,283	0,269	0,267
Capacitance (µF / km)	0,162	0,199	0,254	0,298	0,359	0,394	0,447	0,574	0,638	0,731	0,757
12/20 (24) kV											
DC conductor resistance at 20 °C (Ω / km)	0,727	0,387	0,193	0,124	0,075	0,060	0,047	0,028	0,022	0,018	0,015
AC conductor resistance, 50 Hz, at 90 °C (Ω / km)	0,927	0,494	0,247	0,159	0,098	0,079	0,063	0,041	0,034	0,030	0,027
Inductance (mH / km)	0,481	0,432	0,384	0,359	0,333	0,323	0,309	0,296	0,287	0,276	0,277
Capacitance (µF / km)	0,137	0,173	0,219	0,255	0,306	0,334	0,378	0,483	0,535	0,612	0,634

CHARACTERISTICS	Cross-Section (mm²)										
	50	95	150	240	300	400	500	630	800	1 000	1 200
COPPER											
18/30 (36) kV											
DC conductor resistance at 20 °C (Ω / km)	0,387	0,193	0,124	0,075	0,060	0,047	0,037	0,028	0,022	0,018	0,015
AC conductor resistance, 50 Hz, at 90 °C (Ω / km)	0,494	0,247	0,159	0,098	0,079	0,063	0,050	0,041	0,034	0,029	0,027
Inductance (mH / km)	0,469	0,417	0,389	0,360	0,349	0,332	0,320	0,315	0,305	0,292	0,290
Capacitance (µF / km)	0,136	0,168	0,194	0,230	0,250	0,280	0,309	0,353	0,389	0,443	0,458

Values subject to variation depending on dimensional tolerances.

HERSATENE®

Cu or AL/XLPE/CTS/PVC

3.6/6 (7.2) kV, 6/10 (12) kV, 8.7/15 (17.5) kV, 12/20 (24) kV, 18/30 (36) kV

MAXIMUM CURRENT RATING:

Cross-Section (mm²)	Permanent current (kA)				Short circuit current, 1s (kA)		Voltage drop ΔU (cos φ)	
	Directly buried		In air		Conductor	Screen	0,8	0,9
	Trefoil	Flat	Trefoil	Flat				
ALUMINIUM								
6/10 (12) kV								
25	125	128	122	125	2,364	1,68	2,276	2,503
35	149	153	147	151	3,309	1,68	1,679	1,835
50	175	179	185	189	4,728	1,68	1,271	1,377
70	214	220	226	236	6,619	1,68	0,910	0,975
95	252	262	266	285	8,983	1,68	0,687	0,726
120	291	299	318	330	11,346	1,68	0,562	0,588
150	325	334	360	370	14,183	1,68	0,477	0,493
185	370	379	417	430	17,492	1,68	0,397	0,405
240	428	439	490	504	22,693	1,68	0,326	0,326
300	485	492	567	579	28,366	1,68	0,279	0,274
400	554	562	662	669	37,821	1,68	0,236	0,228
500	631	637	771	776	47,276	1,68	0,204	0,192
630	720	727	897	905	59,568	1,68	0,178	0,165
800	810	812	1 037	1 040	75,642	1,68	0,161	0,146
1 000	895	890	1 165	1 160	94,553	1,68	0,147	0,130
1 200	957	945	1 264	1 252	113,463	1,68	0,139	0,122

Values subject to variation depending on dimensional tolerances.

The current ratings are calculated for a 3 phase system

Operating conditions

- Ground temperature = 20°C
- Air temperature = 30°C
- Ground thermal resistivity = 1 Km/W

MAXIMUM CURRENT RATING:

Cross-Section (mm²)	Permanent current (kA)				Short circuit current, 1s (kA)		Voltage drop ΔU (cos φ)	
	Directly buried		In air		Conductor	Screen	0,8	0,9
	Trefoil	Flat	Trefoil	Flat				
ALUMINIUM								
8,7/15 (17.5) kV								
25	125	128	122	125	2,364	1,68	2,282	2,508
35	149	153	147	151	3,309	1,68	1,685	1,839
50	175	179	185	189	4,728	1,68	1,277	1,381
70	214	220	226	236	6,619	1,68	0,916	0,979
95	252	262	266	285	8,983	1,68	0,692	0,730
120	291	299	318	330	11,346	1,68	0,568	0,592
150	325	334	360	370	14,183	1,68	0,482	0,496
185	370	379	417	430	17,492	1,68	0,402	0,408
240	428	439	490	504	22,693	1,68	0,330	0,329
300	485	492	567	579	28,366	1,68	0,282	0,277
400	554	562	662	669	37,821	1,68	0,240	0,231
500	631	637	771	776	47,276	1,68	0,207	0,195
630	720	727	897	905	59,568	1,68	0,181	0,167
800	810	812	1 037	1 040	75,642	1,68	0,164	0,147
1 000	895	890	1 165	1 160	94,553	1,68	0,149	0,132
1 200	957	945	1 264	1 252	113,463	1,68	0,141	0,123

Values subject to variation depending on dimensional tolerances.

The current ratings are calculated for a 3 phase system

- Ground temperature = 20°C
- Air temperature = 30°C
- Ground thermal resistivity = 1 Km/W

General Cable

HERSATENE®

Cu or AL/XLPE/CTS/PVC

3.6/6 (7.2) kV, 6/10 (12) kV, 8.7/15 (17.5) kV, 12/20 (24) kV, 18/30 (36) kV

MAXIMUM CURRENT RATING:

Cross-Section (mm²)	Permanent current (kA)				Short circuit current, 1s (kA)		Voltage drop ΔU (cos φ)	
	Directly buried		In air		Conductor	Screen	0,8	0,9
	Trefoil	Flat	Trefoil	Flat				
ALUMINIUM								
12/20 (24) kV								
25	125	128	122	125	2,364	1,68	2,290	2,513
35	149	153	147	151	3,309	1,68	1,691	1,843
50	175	179	185	189	4,728	1,68	1,282	1,385
70	214	220	226	236	6,619	1,68	0,920	0,982
95	252	262	266	285	8,983	1,68	0,697	0,733
120	291	299	318	330	11,346	1,68	0,572	0,595
150	325	334	360	370	14,183	1,68	0,486	0,499
185	370	379	417	430	17,492	1,68	0,406	0,411
240	428	439	490	504	22,693	1,68	0,335	0,332
300	485	492	567	579	28,366	1,68	0,216	0,200
400	554	562	662	669	37,821	1,68	0,190	0,173
500	631	637	771	776	47,276	1,68	0,210	0,197
630	720	727	897	905	59,568	1,68	0,183	0,168
800	810	812	1 037	1 040	75,642	1,68	0,166	0,149
1 000	895	890	1 165	1 160	94,553	1,68	0,151	0,133
1 200	957	945	1 264	1 252	113,463	1,68	0,143	0,124

Values subject to variation depending on dimensional tolerances.

The current ratings are calculated for a 3 phase system

Operating conditions

- Ground temperature = 20°C
- Air temperature = 30°C
- Ground thermal resistivity = 1 Km/W

MAXIMUM CURRENT RATING:

Cross-Section (mm²)	Permanent current (kA)				Short circuit current, 1s (kA)		Voltage drop ΔU (cos φ)	
	Directly buried		In air		Conductor	Screen	0,8	0,9
	Trefoil	Flat	Trefoil	Flat				
ALUMINIUM								
18/30 (36) kV								
25	125	128	122	125	4,728	1,68	1,293	1,393
35	149	153	147	151	6,619	1,68	0,931	0,990
50	175	179	185	189	8,983	1,68	0,708	0,741
70	214	220	226	236	11,346	1,68	0,582	0,602
95	252	262	266	285	14,183	1,68	0,495	0,506
120	291	299	318	330	17,492	1,68	0,417	0,419
150	325	334	360	370	22,693	1,68	0,342	0,337
185	370	379	417	430	28,366	1,68	0,294	0,285
240	428	439	490	504	37,821	1,68	0,251	0,238
300	485	492	567	579	47,276	1,68	0,216	0,201
400	554	562	662	669	59,568	1,68	0,189	0,172
500	631	637	771	776	75,642	1,68	0,171	0,152
630	720	727	897	905	94,553	1,68	0,155	0,136
800	810	812	1 037	1 040	113,463	1,68	0,147	0,127
1 000	895	890	1 165	1 160	4,728	1,68	1,293	1,393
1 200	957	945	1 264	1 252	6,619	1,68	0,931	0,990

Values subject to variation depending on dimensional tolerances.

The current ratings are calculated for a 3 phase system

Operating conditions

- Ground temperature = 20°C
- Air temperature = 30°C
- Ground thermal resistivity = 1 Km/W

General Cable

HERSATENE®

Cu or AL/XLPE/CTS/PVC

3.6/6 (7.2) kV, 6/10 (12) kV, 8.7/15 (17.5) kV, 12/20 (24) kV, 18/30 (36) kV

ELECTRICAL CHARACTERISTICS:

CHARACTERISTICS	Cross-Section (mm²)										
	25	50	95	150	240	300	400	630	800	1 000	1 200
ALUMINIUM											
6/10 (12) kV											
DC conductor resistance at 20 °C (Ω / km)	1,200	0,641	0,320	0,206	0,125	0,100	0,078	0,047	0,037	0,029	0,025
AC conductor resistance, 50 Hz, at 90 °C (Ω / km)	1,539	0,822	0,411	0,265	0,161	0,130	0,102	0,064	0,051	0,043	0,038
Inductance (mH / km)	0,440	0,403	0,362	0,337	0,312	0,303	0,292	0,275	0,275	0,267	0,262
Capacitance (µF / km)	0,212	0,257	0,322	0,378	0,466	0,510	0,559	0,710	0,813	0,912	0,976
8,7/15 (18) kV											
DC conductor resistance at 20 °C (Ω / km)	1,200	0,641	0,320	0,206	0,125	0,100	0,078	0,047	0,037	0,029	0,025
AC conductor resistance, 50 Hz, at 90 °C (Ω / km)	1,539	0,822	0,411	0,265	0,161	0,130	0,102	0,064	0,051	0,043	0,038
Inductance (mH / km)	0,460	0,422	0,378	0,353	0,326	0,315	0,304	0,284	0,284	0,275	0,270
Capacitance (µF / km)	0,174	0,209	0,259	0,302	0,369	0,403	0,446	0,556	0,634	0,710	0,758
12/20 (24) kV											
DC conductor resistance at 20 °C (Ω / km)	1,200	0,641	0,320	0,206	0,125	0,100	0,078	0,047	0,037	0,029	0,025
AC conductor resistance, 50 Hz, at 90 °C (Ω / km)	1,539	0,822	0,411	0,245	0,161	0,129	0,102	0,063	0,051	0,043	0,038
Inductance (mH / km)	0,483	0,437	0,393	0,366	0,341	0,326	0,315	0,293	0,291	0,282	0,277
Capacitance (µF / km)	0,146	0,182	0,223	0,259	0,319	0,342	0,377	0,468	0,532	0,595	0,634

General Cable

Values subject to variation depending on dimensional tolerances.

ELECTRICAL CHARACTERISTICS:

CHARACTERISTICS	Cross-Section (mm²)										
	50	95	150	240	300	400	500	630	800	1 000	1 200
COPPER											
18/30 (36) kV											
DC conductor resistance at 20 °C (Ω / km)	0,641	0,320	0,206	0,125	0,100	0,078	0,061	0,047	0,037	0,029	0,025
AC conductor resistance, 50 Hz, at 90 °C (Ω / km)	0,822	0,411	0,265	0,161	0,129	0,101	0,080	0,063	0,051	0,042	0,037
Inductance (mH / km)	0,473	0,425	0,394	0,363	0,351	0,338	0,325	0,313	0,309	0,298	0,293
Capacitance (µF / km)	0,142	0,171	0,193	0,235	0,255	0,279	0,310	0,343	0,387	0,431	0,458

Values subject to variation depending on dimensional tolerances.

HERSATENE®

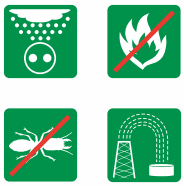
Cu or AL/XLPE/CTS/PVC or Cu or AL/XLPE/CTS/PVC/STA or SWA/PVC
3.6/6 (7,2) kV - 6/10 (12) kV - 8.7/15 (17.5) kV - 12/20 (24) kV - 18/30 (36) kV

STANDARDS:

CONSTRUCTION
NF C 33-220
CEI 60 502-2

FIRE PERFORMANCE
IEC 60332-1-2

As option:



CONSTRUCTION:

1. CONDUCTOR
Copper or Aluminium Class 2 to IEC 60228.

2. CONDUCTOR SCREEN
Extruded semiconductor.

3. INSULATION
Cross-linked polyethylene (XLPE).

4. INSULATION SCREEN
Extruded semiconductor.

5. SCREEN
Copper tape(s) helically applied.

Assembly with polypropylene fillers or filling sheath.

In case of armored cables:

6. INNER SHEATH
Polyvinyl Chloride (PVC).

7. ARMOR WITH STEEL TAPES OR STEEL WIRES

8. OUTER SHEATH
Polyvinyl Chloride (PVC).

As option:
- fire retardant,
- oil resistant,
- termite resistant

Core identification: colored tapes under screen.



APPLICATIONS:

Cables for power supply to industry, refineries.

Minimum bending radius during installation = 20 x outer diameter.
Minimum bending radius after installation = 8 x outer diameter.
Admissible temperature range during the installation: – 10°C to + 50°C

Maximum admissible conductor temperature:
- Operating temperature:90°C
- Core short circuit : 250°C

PHYSICAL CHARACTERISTICS:

6/10 (12) kV

COPPER

Cross section (mm²)	Diameter over insulation (mm)	Overall diameter (mm)	Weight (kg/km)	Minimum bending radius after installation (mm)	Minimum bending radius during installation (mm)	Maximum tensile strength (daN)
25	13,80	40,5	2 400	526,5	810	375
35	14,70	42,5	2 800	552,5	850	525
50	16,10	46,0	3 450	598,0	920	750
70	18,10	50,5	3 650	656,5	1 010	1 050
95	19,65	54,0	4 550	702,0	1 080	1 425
120	21,10	57,5	5 400	747,5	1 150	1 800
150	22,50	61,0	6 300	793,0	1 220	2 250
185	24,35	65,0	7 600	845,0	1 300	2 275
240	26,50	70,0	9 400	910,0	1 400	3 600
300	28,75	75,0	11 500	975,0	1 500	4 500
400	32,25	83,0	14 300	1 079	1 660	6 000
500	35,60	90,5	17 800	1 176,5	1 810	7 500
630	40,60	103,5	23 100	1 345,5	2 070	9 450
800	44,80	113,5	28 700	1 475,5	2 270	12 000
1 000	51,00	127,0	36 700	1 651,0	2 540	15 000
1 200	52,70	131,5	41 300	1 709,5	2 630	18 000

ALUMINIUM

25	14,56	42,0	2 050	546,0	840	225
35	15,51	44,0	2 350	572,0	880	315
50	16,78	47,5	2 750	617,5	950	450
70	18,66	52,0	2 550	676,0	1 040	630
95	19,96	55,0	2 950	715,0	1 100	855
120	21,86	59,0	3 450	767,0	1 180	1 080
150	22,76	61,5	3 800	799,5	1 230	1 350
185	25,51	67,5	4 350	877,5	1 350	1 665
240	27,16	71,5	5 100	929,5	1 430	2 160
300	29,36	76,5	5 900	994,5	1 530	2 700
400	32,16	83,0	7 100	1 079,0	1 660	3 600
500	35,66	90,5	8 700	1 176,5	1 810	4 500
630	39,41	99,5	10 500	1 293,5	1 990	5 670
800	44,56	113,0	13 500	1 469,0	2 260	7 200
1 000	49,56	124,0	16 500	1 612,0	2 480	9 000
1 200	52,76	131,5	18 700	1 709,5	2 630	10 800

Values subject to variation depending on dimensional tolerances.

General Cable

HERSATENE®

Cu or AL/XLPE/CTS/PVC or Cu or AL/XLPE/CTS/PVC/STA or SWA/PVC
3.6/6 (7.2) kV, 6/10 (12) kV, 8.7/15 (17.5) kV, 12/20 (24) kV, 18/30 (36) kV

PHYSICAL CHARACTERISTICS:

Cross section (mm²)	Diameter over insulation (mm)	Overall diameter (mm)	Weight (kg/km)	Minimum bending radius after installation (mm)	Minimum bending radius during installation (mm)	Maximum tensile strength (daN)
8.7/15 (17.5) kV						
COPPER						
25	16,00	45,5	2 850	591,5	910	375
35	16,90	47,5	3 300	617,5	950	525
50	18,50	51,5	4 000	669,5	1030	750
70	20,30	55,5	4 050	721,5	1 110	1 050
95	21,85	59,0	4 950	767,0	1 180	1 425
120	23,30	62,5	5 900	812,5	1 250	1 800
150	24,70	65,5	6 800	851,5	1 310	2 250
185	26,55	70,0	8 100	910,0	1 400	2 275
240	28,70	75,0	9 900	975,0	1 500	3 600
300	30,95	80,0	12 000	1 040,0	1 600	4 500
400	34,45	88,0	14 900	1 144,0	1 760	6 000
500	37,80	95,5	18 500	1 241,5	1 910	7 500
630	42,80	108,5	23 900	1 410,5	2 170	9 450
800	47,00	118,5	29 500	1 540,5	2 370	12 000
1 000	53,20	132,0	37 600	1 716,0	2 640	15 000
1 200	54,90	136,5	42 300	1 774,5	2 730	18 000
ALUMINIUM						
25	16,76	47,0	2 550	611,0	940	225
35	17,71	49,5	2 850	643,5	990	315
50	18,98	52,5	3 250	682,5	1 050	450
70	20,86	57,0	3 000	741,0	1 140	630
95	22,16	60,0	3 400	780,0	1 200	855
120	24,06	62,0	3 650	806,0	1 240	1 080
150	24,96	66,5	4 150	864,5	1 330	1 350
185	27,71	72,5	4 900	942,5	1 450	1 665
240	29,36	76,5	5 700	994,5	1 530	2 160
300	31,56	81,5	6 500	1 059,5	1 630	2 700
400	34,36	88,0	7 800	1 144,0	1 760	3 600
500	37,86	96,0	9 400	1 248,0	1 920	4 500
630	41,61	104,5	11 200	1 358,5	2 090	5 670
800	46,76	118,0	14 300	1 534,0	2 360	7 200
1 000	51,76	129,0	17 400	1 677,0	2 580	9 000
1 200	54,96	136,5	19 700	1 774,5	2 730	10 800

Values subject to variation depending on dimensional tolerances.

PHYSICAL CHARACTERISTICS:

12/20 (24) kV

COPPER

Cross section (mm²)	Diameter over insulation (mm)	Overall diameter (mm)	Weight (kg/km)	Minimum bending radius after installation (mm)	Minimum bending radius during installation (mm)	Maximum tensile strength (daN)
25	18,80	52,0	3 500	676,0	1 040	375
35	18,90	52,5	3 800	682,5	1 050	525
50	20,30	56,0	3 250	728,0	1 120	750
70	22,30	60,5	4 450	786,5	1 210	1 050
95	23,85	64,0	5 400	832,0	1 280	1 425
120	25,30	67,0	6 300	871,0	1 340	1 800
150	26,70	70,5	7 300	916,5	1 410	2 250
185	28,55	74,5	8 600	968,5	1 490	2 275
240	30,70	79,5	10 500	1 033,5	1 590	3 600
300	32,95	84,5	12 600	1 098,5	1 690	4 500
400	36,45	93,0	15 500	1 209,0	1 860	6 000
500	39,80	100,5	19 100	1 306,5	2 010	7 500
630	44,80	113,5	24 600	1 475,5	2 270	9 450
800	49,00	123,0	30 400	1 599,0	2 460	12 000
1 000	55,20	137,0	38 500	1 781,0	2 740	15 000
1 200	56,90	141,0	43 100	1 833,0	2 820	18 000

ALUMINIUM

25	19,56	53,5	3 250	695,5	1 070	225
35	19,71	54,0	3 350	702,0	1 080	315
50	20,98	57,5	2 500	747,5	1 150	450
70	22,86	61,5	3 400	799,5	1 230	630
95	24,16	64,5	3 850	838,5	1 290	855
120	26,06	69,0	4 250	897,0	1 380	1 080
150	26,96	71,0	4 650	923,0	1 420	1 350
185	29,71	77,0	5 400	1 001,0	1 540	1 665
240	31,36	81,0	6 200	1 053,0	1 620	2 160
300	33,56	86,0	7 100	1 118,0	1 720	2 700
400	36,36	92,5	8 400	1 202,5	1 850	3 600
500	39,86	100,5	10 000	1 306,5	2 010	4 500
630	43,61	109,0	12 000	1 417,0	2 180	5 670
800	48,76	122,5	15 200	1 592,5	2 450	7 200
1 000	53,76	134,0	18 300	1 742,0	2 680	9 000
1 200	56,96	141,0	20 600	1 833,0	2 820	10 800

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3.6/6 (7.2) kV, 6/10 (12) kV, 8.7/15 (17.5) kV, 12/20 (24) kV, 18/30 (36) kV

PHYSICAL CHARACTERISTICS:

Cross section (mm²)	Diameter over insulation (mm)	Overall diameter (mm)	Weight (kg/km)	Minimum bending radius after installation (mm)	Minimum bending radius during installation (mm)	Maximum tensile strength (daN)
18/30 (36) kV						
COPPER						
50	25,30	67,5	4050	877,5	1 350	750
70	27,30	71,5	5600	929,5	1 430	1 050
95	28,85	75,5	6600	981,5	1 510	1 425
120	30,30	79,0	7600	1027,0	1 580	1 800
150	31,70	82,0	8600	1066,0	1 640	2 250
185	33,55	86,0	9900	1118,0	1 720	2 275
240	35,70	91,0	11900	1183,0	1 820	3 600
300	37,95	96,5	14100	1254,5	1 930	4 500
400	41,45	104,0	17100	1352,0	2 080	6 000
500	44,80	112,0	20900	1456,0	2 240	7 500
630	49,80	125,0	26600	1625,0	2 500	9 450
800	54,00	134,5	32500	1748,5	2 690	12 000
1 000	60,20	148,5	40900	1930,5	2 970	15 000
1 200	61,90	152,5	45600	1982,5	3 050	18 000
ALUMINIUM						
50	25,98	68,5	3 400	890,5	1 370	450
70	27,86	73,0	4 400	949,0	1 460	630
95	29,16	76,0	4 950	988,0	1 520	855
120	31,06	80,5	5 600	1 046,5	1 610	1 080
150	31,63	82,5	5 900	1 072,5	1 650	1 350
185	36,45	88,5	6 800	1 150,5	1 770	1 665
240	36,36	92,5	7 700	1 202,5	1 850	2 160
300	38,56	97,5	8 600	1 267,5	1 950	2 700
400	41,36	104,0	10 000	1 352,0	2 080	3 600
500	44,86	112,0	11 800	1 456,0	2 240	4 500
630	48,61	120,5	13 900	1 566,5	2 410	5 670
800	53,76	134,0	17 300	1 742,0	2 680	7 200
1 000	58,76	145,0	20 600	1 885,0	2 900	9 000
1 200	61,96	152,5	23 000	1 982,5	3 050	10 800

Values subject to variation depending on dimensional tolerances.

MAXIMUM CURRENT RATING:

Cross-Section (mm²)	Permanent current (kA)		Short circuit current, 1s (kA)		Voltage drop ΔU (cos φ)	
	Directly buried	In air	Conductor	Screen	0,8	0,9
6/10 (12) kV						
COPPER						
25	160	156	3,572	1,68	1,414	1,539
35	192	189	5,001	1,68	1,050	1,132
50	226	227	7,144	1,68	0,803	0,856
70	277	282	10,001	1,68	0,585	0,614
95	331	345	13,573	1,68	0,448	0,461
120	377	400	17,145	1,68	0,374	0,380
150	423	456	21,431	1,68	0,320	0,320
185	478	523	26,432	1,68	0,273	0,269
240	554	619	34,290	1,68	0,229	0,221
300	627	718	42,862	1,68	0,200	0,189
ALUMINIUM						
25	125	121	2,364	1,68	2,263	2,494
35	148	146	3,309	1,68	1,667	1,826
50	175	175	4,728	1,68	1,260	1,369
70	215	220	6,619	1,68	0,900	0,968
95	257	268	8,983	1,68	0,678	0,719
120	292	309	11,346	1,68	0,554	0,582
150	327	351	14,183	1,68	0,468	0,486
185	372	407	17,492	1,68	0,389	0,399
240	431	479	22,693	1,68	0,318	0,320
300	487	552	28,366	1,68	0,271	0,269

Values subject to variation depending on dimensional tolerances.

The current ratings are calculated for a 3 phase system

Operating conditions

- Ground temperature = 20°C
- Air temperature = 30°C
- Ground thermal resistivity = 1 Km/W

HERSATENE®

Cu or AL/XLPE/CTS/PVC or Cu or AL/XLPE/CTS/PVC/STA or SWA/PVC
3.6/6 (7.2) kV, 6/10 (12) kV, 8.7/15 (17.5) kV, 12/20 (24) kV, 18/30 (36) kV

MAXIMUM CURRENT RATING:

Cross-Section (mm²)	Permanent current (kA)		Short circuit current, 1s (kA)		Voltage drop ΔU (cos φ)	
	Directly buried	In air	Conductor	Screen	0,8	0,9
8.7/15 (17.5) kV						
COPPER						
25	160	156	3,572	1,68	1,422	1,545
35	192	189	5,001	1,68	1,057	1,137
50	226	227	7,144	1,68	0,810	0,861
70	277	282	10,001	1,68	0,591	0,618
95	331	345	13,573	1,68	0,454	0,466
120	377	400	17,145	1,68	0,379	0,384
150	423	456	21,431	1,68	0,325	0,324
185	478	523	26,432	1,68	0,278	0,272
240	554	619	34,290	1,68	0,233	0,224
300	627	718	42,862	1,68	0,204	0,192
ALUMINIUM						
25	98	121	2,364	1,68	2,271	2,500
35	125	146	3,309	1,68	1,675	1,831
50	175	175	4,728	1,68	1,267	1,374
70	215	220	6,619	1,68	0,906	0,972
95	257	268	8,983	1,68	0,684	0,723
120	292	309	11,346	1,68	0,557	0,584
150	327	351	14,183	1,68	0,474	0,490
185	372	407	17,492	1,68	0,394	0,403
240	431	479	22,693	1,68	0,322	0,323
300	487	552	28,366	1,68	0,275	0,272

Values subject to variation depending on dimensional tolerances.

The current ratings are calculated for a 3 phase system

Operating conditions

- Ground temperature = 20°C
- Air temperature = 30°C
- Ground thermal resistivity = 1 Km/W

MAXIMUM CURRENT RATING:

Cross-Section (mm²)	Permanent current (kA)		Short circuit current, 1s (kA)		Voltage drop ΔU (cos φ)	
	Directly buried	In air	Conductor	Screen	0,8	0,9
12/20 (24) kV						
COPPER						
25	160	156	3,572	1,68	1,431	1,552
35	192	189	5,001	1,68	1,064	1,142
50	226	227	7,144	1,68	0,816	0,865
70	277	282	10,001	1,68	0,596	0,622
95	331	345	13,573	1,68	0,459	0,469
120	377	400	17,145	1,68	0,384	0,387
150	423	456	21,431	1,68	0,329	0,327
185	478	523	26,432	1,68	0,282	0,275
240	554	619	34,290	1,68	0,237	0,226
300	627	718	42,862	1,68	0,207	0,194
ALUMINIUM						
25	125	121	2,364	1,68	2,280	2,506
35	148	146	3,309	1,68	1,681	1,836
50	175	175	4,728	1,68	1,272	1,378
70	215	220	6,619	1,68	0,912	0,976
95	257	268	8,983	1,68	0,689	0,727
120	292	309	11,346	1,68	0,564	0,589
150	327	351	14,183	1,68	0,478	0,494
185	372	407	17,492	1,68	0,398	0,406
240	431	479	22,693	1,68	0,326	0,326
300	487	552	28,366	1,68	0,279	0,274

Values subject to variation depending on dimensional tolerances.

The current ratings are calculated for a 3 phase system

Operating conditions

- Ground temperature = 20°C
- Air temperature = 30°C
- Ground thermal resistivity = 1 Km/W

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3.6/6 (7.2) kV, 6/10 (12) kV, 8.7/15 (17.5) kV, 12/20 (24) kV, 18/30 (36) kV

MAXIMUM CURRENT RATING:

Cross-Section (mm²)	Permanent current (kA)		Short circuit current, 1s (kA)		Voltage drop ΔU (cos φ)	
	Directly buried	In air	Conductor	Screen	0,8	0,9
18/30 (36) kV						
COPPER						
50	226	227	7,144	1,68	0,829	0,875
70	277	282	10,001	1,68	0,608	0,631
95	331	345	13,573	1,68	0,470	0,477
120	377	400	17,145	1,68	0,394	0,395
150	423	456	21,431	1,68	0,339	0,334
185	478	523	26,432	1,68	0,291	0,282
240	554	619	34,290	1,68	0,246	0,233
300	627	718	42,862	1,68	0,216	0,200
ALUMINIUM						
50	175	175	4,728	1,68	1,285	1,387
70	215	220	6,619	1,68	0,923	0,985
95	257	268	8,983	1,68	0,700	0,735
120	292	309	11,346	1,68	0,574	0,596
150	327	351	14,183	1,68	0,488	0,501
185	372	407	17,492	1,68	0,407	0,412
240	431	479	22,693	1,68	0,335	0,332
300	487	552	28,366	1,68	0,287	0,280

Values subject to variation depending on dimensional tolerances.

The current ratings are calculated for a 3 phase system

Operating conditions

- Ground temperature = 20°C
- Air temperature = 30°C
- Ground thermal resistivity = 1 Km/W

ELECTRICAL CHARACTERISTICS:

CHARACTERISTICS	Cross-Section (mm²)									
	25	35	50	70	95	120	150	185	240	300
6/10 (12) kV										
COPPER										
DC conductor resistance at 20 °C (Ω / km)	0,727	0,524	0,387	0,268	0,193	0,153	0,124	0,099	0,075	0,060
AC conductor resistance, 50 Hz, at 90 °C (Ω / km)	0,927	0,668	0,494	0,342	0,247	0,196	0,159	0,128	0,098	0,080
Inductance (mH / km)	0,397	0,378	0,363	0,338	0,323	0,312	0,303	0,293	0,283	0,274
Capacitance (µF / km)	0,196	0,215	0,243	0,284	0,315	0,345	0,373	0,410	0,453	0,498
ALUMINIUM										
DC conductor resistance at 20 °C (Ω / km)	1,200	0,868	0,641	0,443	0,320	0,253	0,206	0,164	0,125	0,100
AC conductor resistance, 50 Hz, at 90 °C (Ω / km)	1,539	1,113	0,822	0,568	0,411	0,325	0,265	0,211	0,162	0,130
Inductance (mH / km)	0,402	0,383	0,370	0,345	0,332	0,317	0,311	0,295	0,287	0,279
Capacitance (µF / km)	0,212	0,231	0,257	0,295	0,322	0,360	0,378	0,433	0,466	0,510
8.7/15 (18) kV										
COPPER										
DC conductor resistance at 20 °C (Ω / km)	0,727	0,524	0,387	0,268	0,193	0,153	0,124	0,099	0,075	0,060
AC conductor resistance, 50 Hz, at 90 °C (Ω / km)	0,927	0,668	0,494	0,342	0,247	0,196	0,159	0,128	0,098	0,079
Inductance (mH / km)	0,422	0,402	0,387	0,358	0,342	0,330	0,319	0,308	0,297	0,288
Capacitance (µF / km)	0,162	0,177	0,196	0,230	0,254	0,277	0,298	0,326	0,359	0,394
ALUMINIUM										
DC conductor resistance at 20 °C (Ω / km)	1,200	0,868	0,641	0,443	0,320	0,253	0,206	0,164	0,125	0,100
AC conductor resistance, 50 Hz, at 90 °C (Ω / km)	1,539	1,113	0,822	0,568	0,411	0,325	0,265	0,211	0,161	0,130
Inductance (mH / km)	0,426	0,406	0,391	0,365	0,351	0,326	0,327	0,310	0,301	0,292
Capacitance (µF / km)	0,174	0,190	0,209	0,239	0,259	0,288	0,302	0,344	0,369	0,403

Values subject to variation depending on dimensional tolerances.

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3.6/6 (7.2) kV, 6/10 (12) kV, 8.7/15 (17.5) kV, 12/20 (24) kV, 18/30 (36) kV

ELECTRICAL CHARACTERISTICS:

CHARACTERISTICS	Cross-Section (mm²)									
	25	35	50	70	95	120	150	185	240	300
12/20 (24) kV										
COPPER										
DC conductor resistance at 20 °C (Ω / km)	0.727	0.524	0.387	0.268	0.193	0.153	0.124	0.099	0.075	0.060
AC conductor resistance, 50 Hz, at 90 °C (Ω / km)	0.927	0.668	0.494	0.342	0.247	0.196	0.159	0.128	0.098	0.079
Inductance (mH / km)	0.450	0.422	0.403	0.375	0.358	0.344	0.334	0.321	0.310	0.299
Capacitance (µF / km)	0.137	0.155	0.173	0.199	0.219	0.238	0.255	0.279	0.306	0.334
ALUMINIUM										
DC conductor resistance at 20 °C (Ω / km)	1.200	0.868	0.641	0.443	0.320	0.253	0.206	0.164	0.125	0.100
AC conductor resistance, 50 Hz, at 90 °C (Ω / km)	1.539	1.113	0.822	0.568	0.411	0.325	0.265	0.211	0.161	0.129
Inductance (mH / km)	0.453	0.425	0.409	0.381	0.366	0.348	0.341	0.323	0.314	0.303
Capacitance (µF / km)	0.146	0.165	0.182	0.206	0.223	0.247	0.259	0.294	0.314	0.342

CHARACTERISTICS	Cross-Section (mm²)							
	50	70	95	120	150	185	240	300
18/30 (36) kV								
COPPER								
DC conductor resistance at 20 °C (Ω / km)	0.387	0.268	0.193	0.153	0.124	0.099	0.075	0.060
AC conductor resistance, 50 Hz, at 90 °C (Ω / km)	0.494	0.342	0.247	0.196	0.159	0.128	0.098	0.079
Inductance (mH / km)	0.444	0.411	0.392	0.377	0.365	0.351	0.337	0.326
Capacitance (µF / km)	0.135	0.154	0.168	0.182	0.194	0.211	0.230	0.250
ALUMINIUM								
DC conductor resistance at 20 °C (Ω / km)	0.641	0.443	0.320	0.253	0.206	0.164	0.125	0.100
AC conductor resistance, 50 Hz, at 90 °C (Ω / km)	0.822	0.568	0.411	0.325	0.265	0.211	0.161	0.129
Inductance (mH / km)	0.447	0.417	0.400	0.380	0.372	0.351	0.341	0.329
Capacitance (µF / km)	0.142	0.159	0.171	0.188	0.196	0.221	0.235	0.255

Values subject to variation depending on dimensional tolerances.



General Cable | ONE COMPANY
CONNECTING THE WORLD



ENERGY

Markets: Transmission, Distribution, Generation

Products: Underground Cable, Substation Cable, Overhead Conductor & Cable



CONSTRUCTION

Markets: Residential, Commercial, Institutional

Products: Building Wire, Portable Cord, Industrial Cable



TELCO

Markets: Independent Telephone Operating Companies (ITOCs), Regional Bell Operating Companies (RBOCs)

Products: Air Core Cable, Filled Core Cable, Wire Products, Central Office Cable, Optical Cable, Indoor/Outdoor Telephone Cable, Drop wire Cable



OIL, GAS & PETROCHEMICAL

Markets: Upstream, Downstream, Midstream

Products: Offshore Cable, Subsea Cable, Onshore Cable



NUCLEAR

Markets: Nuclear Power Plants

Products: Power, Instrumentation, Control



TRANSPORTATION

Markets: Automotive, Agricultural Equipment, Rail & Transit, Heavy Duty & Industrial Trucks, Bus

Products: Rolling Stock Cable, Signalling Cable, On-Vehicle Data Communications, Control & Power Wire and Cable, Ignition Wire Sets & Coil-on-Plug, Battery Cable, Bulk Ignition Wire & Primary Wire, Electric Vehicle (EV) Products, Wire Harnesses and Assemblies



RENEWABLE ENERGY

Markets: Solar, Hydro, Wind

Products: Panel Wire, Cu & AL PV Wire, Tower Wire & Cable, Collection System Cable, Industrial Cable, Utility Cable



INDUSTRIAL

Markets: Food & Beverage, Automation, Water/Wastewater, Pulp & Paper

Products: Control Cable, Instrumentation Cable, Power Cable, Automation Cable, Portable & Temporary Power Cord, Solar Cable



ENTERPRISE & COMMUNICATIONS

Markets: Commercial/Residential Buildings, Data Centers, Education, Finance, Federal/Government, Healthcare, Broadcast & AV, Manufacturing

Products: Datacom Cable, Fiber Optic Cable, Broadcast & AV Products, Electronics Cable, Telecommunications Cable



MARINE

Markets: Shipyards building, Ships & Other floating vessels

Products: Power, Control Instrumentation & Communication Cables



MINING

Markets: Surface, Underground

Products: Portable & Trailing Mining Cable, Mine Power Feeder Cable, Industrial Cable



MILITARY

Markets: On Land, At Sea, In the Air

Products: Communications Wire & Cable (Cu & Fiber), Shore to Ship Power Cable, Wire Harnesses & Assemblies

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