

PRODUCT CATALOG

TRANSMITTING ENERGY, LEADING QUALITY.

ABOUT US

Conduspar, a Brazilian company that completes 30 years of market in 2016, is practically present in all market segments, with a wide range of power and telecommunication cables.

With a production area of more than 100,000 m², the company is located in São José dos Pinhais, in the state of Paraná, and has a logistics structure to serve the entire Brazilian and Latin American market. Its strategic location allows fast flow of products through the main roads of the country and the port of Paranaguá.

For us, the excellence in logistics and the commitment to the attention to the expectations of the clients represent a great strategic advantage.



1986

In May 1986, takes place the foundation of Conduspar, specialized in the manufacturing of electric conductors.

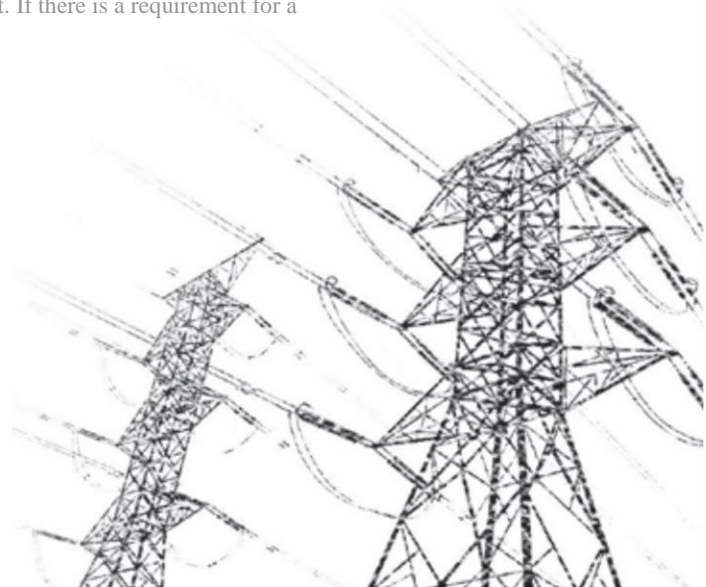
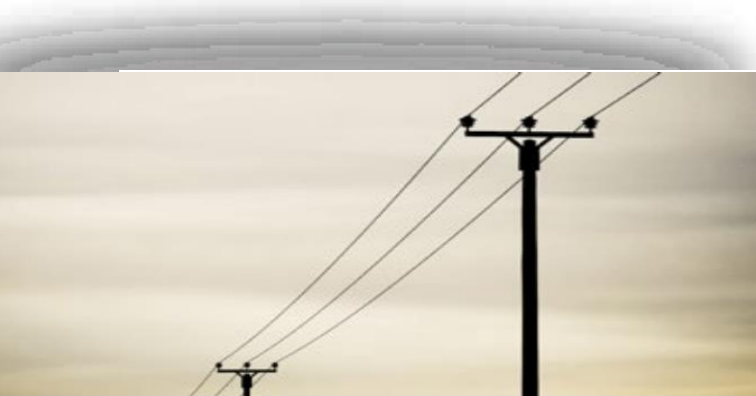
Established initially in Curitiba, PR, in an area with about 1,300 m², at the time, the factory processed 12 tons of copper per month.

OUR SOLUTIONS

Conduspar has one of the largest productive capacities in Brazil. Our wide variety of products and the possibility of attending to the different specifications of customers make us one of the most complete suppliers of power and telecommunication cables in South America.

Our product line includes from bare cables for transmission lines to insulated cables for underground networks with voltages up to 69 kV. We still have an extensive line of optical cables, through our joint venture Sterlite Conduspar.

The goal in Product Engineering and Development puts us in the forefront. If there is a requirement for a power or optical cable, there is a Conduspar cable that satisfies it!



OUR MARKET

The projects of energy generation and transmission count on the reliability of the lines of Conduspar products.

Substations, transmission lines and the entire hydroelectric, thermoelectric and renewable energy matrix in Brazil already enjoy Conduspar cables. The company serves energy distribution dealers in virtually all of their power cable needs. At another point, consumers can have the strictest quality control and security for their installation.

Industry and its infrastructure move the countries' economy. Our production capacity and the possibility of product customization add value to our partners, which makes their production line more efficient, reliable and reaching more and more markets.

Large telecom operators already have our optical cables in their backbone structure and long distance data transmission. More than energy, Conduspar drives communication and entertainment to millions of people.





MISSION

To guarantee to our clients solutions in conductors with contribution to the development.

VISION

To be the reference among the best companies in the conductor segment.





OURS VALUES

Each one of us is committed - with Condu spar, with society and with itself - for the quality of our efforts, assuming the responsibility of developing our corporate culture and sharing our VALUES.

INTEGRITY

We will do what is right and not just what is necessary. We act ethically and justly in honoring our commitments. We are individually and collectively responsible for everything that happens to us. Truth and transparency prevail in all situations. We respect life in all its forms, manifestations and situations. We guarantee principles of respect for differences, non-discrimination and equal opportunities. We strive for the total absence of protectionism and privileges.

EXCELLENCE

We act with professionalism and focus on results, inspiring reliability to our brand. We are optimistic and entrepreneurs by nature, confident of the possibility of doing better. We set the highest standard of reference for everything we do, and pursue truly challenging goals. We cultivate the improvement and we look tirelessly for solutions that contribute to the reach of our objectives. The incessant quest for excellence is what drives us to be the benchmark in our segment.

COLLECTIVITY

We are convinced that no one makes great achievements only with good ideas. We work better with the coordinated effort, sharing visions and multiplying our strengths. We value individual excellence, but we strive for teamwork and collective achievement. We are responsible for the development of our peers, convinced that their weaknesses are ours. We create a lot of space for opinion and no dissent. We are a team!

INNOVATION

We inspire and create positive changes around us motivated by the spirit of innovation. We challenge conventional wisdom, challenge our assumptions, and create new opportunities. We value the creativity and perseverance of searching incessantly for the best result. We transform new ideas into reality to better serve our clients, and we act with enthusiasm before the challenges.

DEVELOPMENT

The people and their talents are the competitive difference of Condu spar. We focus on the integral evolution of the human being by generating opportunities through training and alignment of purposes. We encourage continuous development to build an environment conducive to learning. Humility and simplicity characterize our actions and decisions towards evolution. We believe in education as a source of transformation and sustainable development.

PRODUCT INDEX

INSULATED CONDUCTORS

Flexpar Cable BWF 750 V
Toxfree Cable 750 V
Rigid Cable BWF 750 V
Wire BWF 750 V

CORDS

Parallel 300 V
PP 500 V
Welding Cable 750 V

LOW VOLTAGE ENERGY

Flex Cable HEPR 1 kV
Toxfree Cable 1 kV
Rigid Cable HEPR 1 kV
Flex Cable PVC 1 kV
XLPE Cable 1 kV

SPECIAL APPLICATIONS

Control Cable
Shielded Control Cable
Cable for Frequency Converter 1 kV
Instrumentation Cable BC
Instrumentation Cable BIC

UNDERGROUND MEDIUM VOLTAGE

Cable MTS105
Cable MTX
Cable MT105
Cable MTS Toxfree

BARE CABLES

Cooper
Aluminum CA
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OVERHEAD LINES

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Protected Cable
Cable MTX-RA 15 kV

SPECIAL LINES

Cable PROSOLAR FV
Cable MTX Grid 35 kV
Cable MTS105 Grid 35 kV
Aluminum Cable with Core in Composite ACCC



Flexpar Cable BWF 750 V


 Conduspar

Application

The Conduspar Line of Flexpar Cables BWF 750 V is suitable for common electrical installations, especially for internal power and lighting circuits. The maximum flexibility of the Flexpar 750 V line is the ideal solution for easy installation.

Construction

Conductor: bare electrolytic copper wires, soft hardness, stringing of class 5, acc. to NM 280.

Insulation: thermoplastic compound of PVC/A.

Available colors: black, light blue, green, red, yellow, white, gray and yellow green.

Maximum Operating Temperatures

In continuous regime: 70°C

In overload: 100°C

In short circuit: 160°C

Reference Standards

ABNT NBR NM 247-3 - Insulated cables with polyvinyl chloride for nominal voltages up to 450/750 V, including - Part 3: Insulated conductors (without coverage) for fixed installations (IEC 60227-3, MOD).

ABNT NBR NM 280 - Conductors of insulated cables (IEC 60228, MOD).

Conditioning

For sections up to 10 mm²: conditioning in rolls of 100 m.

For sections from 16 mm²: conditioning in reels.

Nominal Dimensions

Nominal Section (mm ²)	Conductor Diameter (mm)	Insulation Thickness (mm)	External Diameter (mm)	Nominal Weight (kg/km)
0,5	0,91	0,6	2,2	8,3
0,75	1,12	0,6	2,4	10,9
1	1,29	0,6	2,5	13,4
1,5	1,51	0,7	3,0	19,0
2,5	1,96	0,8	3,7	29,9
4	2,48	0,8	4,2	43,7
6	3,03	0,8	4,7	61,2
10	3,99	1,0	6,1	104
16	5,01	1,0	7,2	149
25	6,19	1,2	8,8	237
35	7,37	1,2	10,0	325
50	8,86	1,4	11,9	465
70	10,60	1,4	13,7	641
95	12,15	1,6	15,7	846
120	13,95	1,6	17,5	1.066
150	16,10	1,8	20,1	1.336
185	17,20	2,0	21,6	1.620
240	20,20	2,2	25,1	2.145

Toxfree Cable 750 V


 Conduspar

Application

The Conduspar Line of Toxfree Cables 750 V is the safest solution for electrical installations, as it has a low smoke emission in case of fire. The NBR 5410 recommends the use of halogen-free and low-smoke cables in installations with large concentrations of people and with long and tumultuous escape routes (BD2, BD3 and BD4).

Construction

Conductor: bare electrolytic copper wires, soft hardness, stringing of class 5, acc. to NM 280.

Insulation: halogen-free polyolefin thermoplastic compound with fire retardant.

Available colors: black, light blue, green, red, yellow, white, gray and yellow green.

Maximum Operating Temperatures

In continuous regime: 70°C

In overload: 100°C

In short circuit: 160°C

Reference Standards

ABNT NBR 13248 - Power cables and insulated conductors without coverage, non-halogen and with low smoke emission, for voltages up to 1 kV - Performance requirements.

ABNT NBR NM 280 - Conductors of insulated cables (IEC 60228, MOD).

Conditioning

For sections up to 10 mm²: conditioning in rolls of 100 m.

For sections from 16 mm²: conditioning in reels.

Nominal Dimensions

Nominal Section (mm ²)	Conductor Diameter (mm)	Insulation Thickness (mm)	External Diameter (mm)	Nominal Weight (kg/km)
1,5	1,51	0,7	3,0	18,6
2,5	1,96	0,8	3,6	29,3
4	2,48	0,8	4,2	42,8
6	3,03	0,8	4,7	60,0
10	3,99	1,0	6,1	102
16	5,01	1,0	7,2	146
25	6,19	1,2	8,8	233
35	7,37	1,2	10,0	319
50	8,86	1,4	11,9	456
70	10,60	1,4	13,7	629
95	12,15	1,6	15,7	829
120	13,95	1,6	17,5	1.045
150	16,10	1,8	20,1	1.309
185	17,20	2,0	21,6	1.588
240	20,20	2,2	25,1	2.102

Rigid Cable BWF 750 V



Application

The Conduspar Line of Rigid Cables BWF 750 V is suitable for common electrical installations. The rigid cables BWF 750 V have the characteristic of non-propagation of flame.

Construction

Conductor: bare electrolytic copper wires, soft hardness, stringing of class 2, acc. to NM 280.

Insulation: thermoplastic compound of PVC/A.

Available colors: black, light blue, green, red, yellow, white, gray and yellow green.

Maximum Operating Temperatures

In continuous regime: 70°C

In overload: 100°C

In short circuit: 160°C

Reference Standards

ABNT NBR NM 247-3 - Insulated cables with polyvinyl chloride for nominal voltages up to 450/750 V, including - Part 3: Insulated conductors (without coverage) for fixed installations (IEC 60227-3, MOD).

ABNT NBR NM 280 - Conductors of insulated cables (IEC 60228, MOD).

Conditioning

In reels.

Nominal Dimensions

Section (mm ²)	Conductor Diameter (mm)	Insulation Thickness (mm)	External Diameter (mm)	Nominal Weight (kg/km)
1,5	1,59	0,7	3,0	20,1
2,5	2,08	0,8	3,8	31,2
4	2,6	0,8	4,3	45,9
6	3,14	0,8	4,8	65,3
10	4,02	1,0	6,1	106
16	4,69	1,0	6,8	166
25	5,89	1,2	8,5	260
35	6,95	1,2	9,5	351
50	8,15	1,4	11,2	476
70	9,55	1,4	12,6	668
95	11,33	1,6	14,8	925
120	12,85	1,6	16,4	1155
150	13,69	1,8	17,6	1420
185	15,78	2,0	20,2	1780
240	18,15	2,2	23,0	2325

Wire BWF 750 V


 Conduspar

Application

The Conduspar Line of Wires BWF 750 V is suitable for common electrical installations. The isolated wires BWF 750 V have the characteristic of non-propagation of flame.

Construction

Conductor: bare electrolytic copper wires, soft hardness, class 1, acc. to NM 280.

Insulation: thermoplastic compound of PVC/A.

Available colors: black, light blue, green, red, yellow, white, gray and yellow green.

Maximum Operating Temperatures

In continuous regime: 70°C

In overload: 100°C

In short circuit: 160°C

Reference Standards

ABNT NBR NM 247-3 - Insulated cables with polyvinyl chloride for nominal voltages up to 450/750 V, including - Part 3: Insulated conductors (without coverage) for fixed installations (IEC 60227-3, MOD).

ABNT NBR NM 280 - Conductors of insulated cables (IEC 60228, MOD).

Conditioning

In reels with 100 m.

Nominal Dimensions

Section (mm ²)	Conductor Diameter (mm)	Insulation Thickness (mm)	External Diameter (mm)	Nominal Weight (kg/km)
1,5	1,38	0,7	2,8	19,9
2,5	1,76	0,8	3,4	30,9
4	2,22	0,8	3,9	45,4
6	2,72	0,8	4,4	64,0
10	3,52	1,0	5,6	106

Parallel 300 V



Application

The Conduspar Line of Parallel 300 V is suitable for temporary connections, such as extension cords, lamp power and similar equipment.

Construction

Conductor: bare electrolytic copper wire, soft hardness, class 1, acc. to NM 280.

Insulation: thermoplastic compound of PVC/D.

Available colors: white and brown.

Maximum Operating Temperature

Continuous regime: 70°C

Reference Standards

ABNT NBR NM 247-5 - Insulated cables with polyvinyl chloride for nominal voltages up to 450/750 V, including - Part 5: Flexibles cables (cords) (IEC 60227-5, MOD).

ABNT NBR NM 280 - Conductors of insulated cables (IEC 60228, MOD).

Conditioning

In rolls of 100 m or in reels.

Nominal Dimensions

Section (mm ²)	Conductor Diameter (mm)	Insulation Thickness (mm)	External Diameter (mm)	Nominal Weight (kg/km)
0,5	0,91	0,7	2,5 x 5,3	22,0
0,75	1,12	0,7	2,7 x 5,7	27,6
1	1,29	0,8	2,9 x 6,1	33,0
1,5	1,51	0,8	3,1 x 6,5	33,0
2,5	1,96	0,8	3,6 x 7,5	42,5
4	2,48	0,8	4,1 x 8,6	89,6

PP 500 V



Application

The Conduspar Line of PP 500 V is suitable for temporary connections, such as extension cords, equipment connection cords and lamp power.

Construction

Conductor: bare electrolytic copper wires, flexible stringing class 5, acc. to NM 280.

Insulation: thermoplastic compound of PVC/D.

Conductor colors:

2 conductors: black and light blue

3 conductors: black, light blue and brown

4 conductors: black, light blue, Brown and yellow green

Coverage: Flexible PVC-compound in black. Other colors on request.

Maximum Operating Temperature

Continuous regime: 70°C

Reference Standards

ABNT NBR NM 247-5 - Insulated cables with polyvinyl chloride for nominal voltages up to 450/750 V, including - Parte 5: Flexibles cables (cords) (IEC 60227-5, MOD).

ABNT NBR NM 280 - Conductors of insulated cables (IEC 60228, MOD).

Conditioning

In rolls of 100 m, limited to 40 kg or in reels.

Nominal Dimensions

2 Conductors					
Conductor Section (mm ²)	Diameter (mm)	Insulation Thickness (mm)	Coverage Thickness (mm)	External Diameter (mm)	Nominal Weight (kg/km)

0,5	0,91	0,6	0,8	6,1	41,8
0,75	1,12	0,6	0,8	6,5	50,1
1	1,29	0,6	0,8	6,8	57,5
1,5	1,51	0,7	0,8	7,7	76,1
2,5	1,96	0,8	1	9,5	119
4	2,48	0,8	1,1	10,8	160
6	3,03	0,8	1,3	12,3	219
10	3,99	1,0	1,5	15,6	358

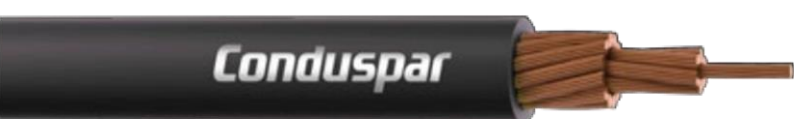
3 Conductors					
Conductor Section (mm ²)	Diameter (mm)	Insulation Thickness (mm)	Coverage Thickness (mm)	External Diameter (mm)	Nominal Weight (kg/km)

0,5	0,91	0,6	0,8	6,4	54,1
0,75	1,12	0,6	0,8	6,9	60,4
1	1,29	0,6	0,8	7,3	70,2
1,5	1,51	0,7	0,9	8,4	97,4
2,5	1,96	0,8	1,1	10,3	151
4	2,48	0,8	1,2	11,7	207
6	3,03	0,8	1,4	13,3	284
10	3,99	1,0	1,5	16,6	411

4 Conductors					
Conductor Section (mm ²)	Diameter (mm)	Insulation Thickness (mm)	Coverage Thickness (mm)	External Diameter (mm)	Nominal Weight (kg/km)

0,5	0,91	0,6	0,8	7,0	60,1
0,75	1,12	0,6	0,8	7,5	73,5
1	1,29	0,6	0,9	8,1	89,2
1,5	1,51	0,7	1,0	9,4	124
2,5	1,96	0,8	1,1	11,2	186
4	2,48	0,8	1,3	12,9	262
6	3,03	0,8	1,4	14,5	353
10	3,99	1,0	1,6	18,3	557

Welding Cable 750 V



Application

The Conduspar Line of Welding Cables 750 V is suitable for connecting electrodes to arc welding machines. The construction of welding cables 750 V has flexibility and strength to ensure the ease operation and durability.

Construction

Conductor: bare electrolytic copper wires, stringing flexible class 5, acc. to NM 280.

Insulation: thermoplastic compound of PVC flexible.

Reference Standards

ABNT NBR 8762 - Extra flexible Cables for arc welding machines and other applications - Specification.

ABNT NBR NM 280 - Conductors of insulated cables (IEC 60228, MOD).

Conditioning

In rolls of 100 m, limited to 40 kg.

In reels, sold per meter.

Nominal Dimensions

Section (mm ²)	Conductor Diameter (mm)	Insulation Thickness (mm)	External Diameter (mm)	Nominal Weight (kg/km)
10	4,02	1,8	7,9	135
16	4,69	1,8	8,6	180
25	5,89	1,8	9,9	258
35	6,95	2,0	11,4	358
50	8,15	2,0	12,6	491
70	9,55	2,2	14,5	684
95	11,33	2,2	16,4	878
120	12,85	2,4	18,4	1.120

Flex Cable HEPR 1 kV



Application

The Conduspar Line of HEPR 1 kV is suitable for residential, commercial and industrial installations, as well as for low voltage power distribution. It has insulation in HEPR (ethylene propylene rubber), which allows maximum current capacity, for temperatures in the conductor up to 90°C.

Construction

Conductor: bare electrolytic copper wires, soft hardness, stringing of class 5, acc. to NM 280.

Insulation: thermosetting compound of HEPR - ethylene propylene rubber.

Conductor colors: black, blue, white and red - in increasing order of conductor quantity.

Coverage and fillings: thermoplastic compound of PVC/ST2.

Maximum Operating Temperatures

In continuous regime: 90°C

In overload: 130°C

In short circuit: 250°C

Reference Standards

ABNT NBR 7286 - Power cables with extruded insulation of ethylene propylene rubber (EPR, HEPR or EPR 105) for voltages from 1 to 35 kV - Performance requirements.

ABNT NBR NM 280 - Conductors of insulated cables (IEC 60228, MOD).

Conditioning

In reels.

Nominal Dimensions

Section (mm ²)	Conductor Diameter (mm)	Insulation Thickness (mm)	External Diameter (mm)	Nominal Weight (kg/km)
10	4,02	1,8	7,9	135
16	4,69	1,8	8,6	180
25	5,89	1,8	9,9	258
35	6,95	2,0	11,4	358
50	8,15	2,0	12,6	491
70	9,55	2,2	14,5	684
95	11,33	2,2	16,4	878
120	12,85	2,4	18,4	1.120

Flex Cable HEPR 1 kV

Nominal Dimensions

Unipolar Cable					
Section (mm ²)	Conductor Diameter (mm)	Coverage Thickness (mm)	External Diameter (mm)	Nominal Weight (kg/km)	
1,5	1,5	0,7	0,9	4,9	32,5
2,5	2,0	0,7	0,9	5,3	43,2
4	2,5	0,7	0,9	5,9	58,3
6	3,0	0,7	0,9	6,4	77,3
10	4,0	0,7	1,0	7,6	120
16	5,0	0,7	1,0	8,7	173
25	6,2	0,9	1,1	10,5	262
35	7,4	0,9	1,1	11,7	352
50	8,9	1,0	1,2	13,7	495
70	10,6	1,1	1,2	15,7	679
95	12,2	1,1	1,3	17,5	880
120	14,0	1,2	1,3	19,5	1110
150	16,1	1,4	1,4	22,4	1388
185	17,2	1,6	1,4	23,9	1670
240	20,2	1,7	1,5	27,4	2196
300	21,8	1,8	1,6	29,4	2714
400	25,8	2,0	1,7	34,1	3561
500	28,2	2,2	1,8	37,3	4468

2 Conductors					
Section (mm ²)	Conductor Diameter (mm)	Coverage Thickness (mm)	External Diameter (mm)	Nominal Weight (kg/km)	
1,5	1,5	0,7	1,0	8,1	80,7
2,5	2,0	0,7	1,0	9,1	107
4	2,5	0,7	1,1	10,2	150
6	3,0	0,7	1,1	11,4	197
10	4,0	0,7	1,2	13,5	302
16	5,0	0,7	1,2	15,8	432
25	6,2	0,9	1,4	19,3	654
35	7,4	0,9	1,4	21,9	885
50	8,9	1,0	1,6	25,6	1238
70	10,6	1,1	1,7	29,9	1712
95	12,2	1,1	1,8	33,3	2199
120	14,0	1,2	1,9	37,7	2797
150	16,1	1,4	2,1	43,3	3554
185	17,2	1,6	2,2	46,6	4258
240	20,2	1,7	2,5	53,7	5621

Flex Cable HEPR 1 kV

Nominal Dimensions

3 Conductors					
Section (mm ²)	Conductor Diameter (mm)	Coverage Thickness (mm)	External Diameter (mm)	Nominal Weight (kg/km)	
1,5	1,5	0,7	1,0	8,6	95,5
2,5	2,0	0,7	1,1	9,6	130,4
4	2,5	0,7	1,1	10,9	184,8
6	3,0	0,7	1,1	12,2	247,6
10	4,0	0,7	1,2	14,5	384,6
16	5,0	0,7	1,3	16,9	559,2
25	6,2	0,9	1,4	20,7	859,3
35	7,4	0,9	1,5	23,5	1158,5
50	8,9	1,0	1,6	27,5	1639,5
70	10,6	1,1	1,8	32,1	2272,7
95	12,2	1,1	1,9	35,8	2930,7
120	14,0	1,2	2,0	40,6	3726,6
150	16,1	1,4	2,2	46,6	4707,7
185	17,2	1,6	2,3	50,2	5663,2
240	20,2	1,7	2,6	57,8	7472,6

4 Conductors					
Section (mm ²)	Conductor Diameter (mm)	Coverage Thickness (mm)	External Diameter (mm)	Nominal Weight (kg/km)	
2,5	2,0	0,7	1,1	10,6	164,3
4	2,5	0,7	1,1	12,0	227,9
6	3,0	0,7	1,2	13,4	314,2
10	4,0	0,7	1,3	16,0	482,5
16	5,0	0,7	1,3	18,7	715,5
25	6,2	0,9	1,5	22,9	1087,7
35	7,4	0,9	1,6	26,0	1485,4
50	8,9	1,0	1,7	30,5	2087,7
70	10,6	1,1	1,9	35,6	2916,4
95	12,2	1,1	2,0	39,8	3766,1
120	14,0	1,2	2,2	45,1	4788,5
150	16,1	1,4	2,4	51,8	6036,7
185	17,2	1,6	2,5	55,8	7298,2
240	20,2	1,7	2,8	64,3	9624,3

Toxfree Cable 1 kV



Application

The Conduspar Line of Toxfree Cable 1 kV is the safest solution for electrical installations, as it has a low smoke emission in case of fire. The standard NBR 5410 recommends the use of halogen-free and low smoke emission cables in installations in large concentrations of people with long and tumultuous escape routes (BD2, BD3 and BD4).

Construction

Conductor: bare electrolytic copper wires, soft hardness, stringing of class 5, acc. to NM 280.

Insulation: thermosetting compound of HEPR - ethylene propylene rubber.

Conductor colors: black, blue, white and red - in increasing order of conductor quantity.

Coverage and fillings: halogen-free polyolefin thermoplastic compound with fire retardant (SHF1).

Maximum Operating Temperatures

In continuous regime: 90°C

In overload: 130°C

In short circuit: 250°C

Reference Standards

ABNT NBR 13248 - Power cables and insulated conductors without coverage, halogen-free and with low smoke emission, for voltages up to 1 kV - Performance requirements.

ABNT NBR NM 280 - Conductors of insulated cables (IEC 60228, MOD).

Conditioning

In reels.

Toxfree Cable 1 kV

Nominal Dimensions

Unipolar Cable					
Section	Conductor Diameter	Insulation Thickness	Coverage Thickness	External Diameter	Nominal Weight
(mm ²)	(mm)	(mm)	(mm)	(mm)	(kg/km)
1,5	1,51	0,7	0,9	4,9	32,5
2,5	1,96	0,7	0,9	5,3	43,2
4	2,48	0,7	0,9	5,9	58,1
6	3,03	0,7	0,9	6,4	77,1
10	3,99	0,7	1,0	7,6	120
16	5,01	0,7	1,0	8,7	173
25	6,19	0,9	1,1	10,5	262
35	7,37	0,9	1,1	11,7	352
50	8,86	1,0	1,2	13,7	495
70	10,6	1,1	1,2	15,7	679
95	12,15	1,1	1,3	17,5	880
120	13,95	1,2	1,3	19,5	1109
150	16,1	1,4	1,4	22,4	1388
185	17,2	1,6	1,4	23,9	1669
240	20,2	1,7	1,5	27,4	2196
300	21,75	1,8	1,6	29,4	2713
400	25,75	2,0	1,7	34,1	3560
500	28,21	2,2	1,8	37,3	4467

2 Conductors					
Section	Conductor Diameter	Insulation Thickness	Coverage Thickness	External Diameter	Nominal Weight
(mm ²)	(mm)	(mm)	(mm)	(mm)	(kg/km)
2 x 1,5	1,51	0,7	1,0	8,1	80,7
2 x 2,5	1,96	0,7	1,0	9,1	108
2 x 4	2,48	0,7	1,1	10,2	150
2 x 6	3,03	0,7	1,1	11,4	198
2 x 10	3,99	0,7	1,2	13,5	302
2 x 16	5,01	0,7	1,2	15,8	433
2 x 25	6,19	0,9	1,4	19,3	655
2 x 35	7,37	0,9	1,4	21,9	886
2 x 50	8,86	1,0	1,6	25,6	1238
2 x 70	10,6	1,1	1,7	29,9	1712
2 x 95	12,15	1,1	1,8	33,3	2199
2 x 120	13,95	1,2	1,9	37,7	2798
2 x 150	16,1	1,4	2,1	43,3	3555
2 x 185	17,2	1,6	2,2	46,6	4258
2 x 240	20,2	1,7	2,5	53,7	5622

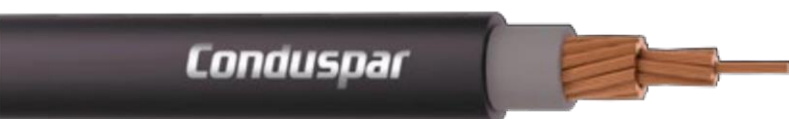
Toxfree Cable 1 kV

Nominal Dimensions

3 Conductors					
Section (mm ²)	Conductor Diameter (mm)	Insulation Thickness (mm)	Coverage Thickness (mm)	External Diameter (mm)	Nominal Weight (kg/km)
3 x 1,5	1,51	0,7	1,0	8,6	95,5
3 x 2,5	1,96	0,7	1,1	9,6	131
3 x 4	2,48	0,7	1,1	10,9	184
3 x 6	3,03	0,7	1,1	12,2	247
3 x 10	3,99	0,7	1,2	14,5	385
3 x 16	5,01	0,7	1,3	16,9	559
3 x 25	6,19	0,9	1,4	20,7	859
3 x 35	7,37	0,9	1,5	23,5	1159
3 x 50	8,86	1,0	1,6	27,5	1640
3 x 70	10,6	1,1	1,8	32,1	2273
3 x 95	12,15	1,1	1,9	35,8	2931
3 x 120	13,95	1,2	2,0	40,6	3727
3 x 150	16,1	1,4	2,2	46,6	4708
3 x 185	17,2	1,6	2,3	50,2	5663
3 x 240	20,2	1,7	2,6	57,8	7473

4 Conductors					
Section (mm ²)	Conductor Diameter (mm)	Insulation Thickness (mm)	Coverage Thickness (mm)	External Diameter (mm)	Nominal Weight (kg/km)
4 x 1,5	1,51	0,7	1,0	9,4	115
4 x 2,5	1,96	0,7	1,1	10,6	165
4 x 4	2,48	0,7	1,1	12,0	227
4 x 6	3,03	0,7	1,2	13,4	314
4 x 10	3,99	0,7	1,3	16,0	482
4 x 16	5,01	0,7	1,3	18,7	715
4 x 25	6,19	0,9	1,5	22,9	1087
4 x 35	7,37	0,9	1,6	26,0	1485
4 x 50	8,86	1,0	1,7	30,5	2087
4 x 70	10,6	1,1	1,9	35,6	2916
4 x 95		1,1	2,0	39,8	3765
4 x 120		1,2	2,2	45,1	4787
4 x 150	16,1	1,4	2,4	51,8	6035
4 x 185	17,2	1,6	2,5	55,8	7297
4 x 240	20,2	1,7	2,8	64,3	9622

Rigid Cable HEPR 1 kV



Application

The Conduspar Line of Rigid Cables HEPR 1 kV is suitable for residential, commercial and industrial electric installations, as well as for low voltage power distribution.

Construction

Conductor: bare electrolytic copper wires, soft hardness, stringing of class 2 compact, acc. to NM 280.

Insulation: thermosetting compound of HEPR - ethylene propylene rubber.

Coverage and fillings: thermoplastic compound of PVC/ST2.

Reference Standards

ABNT NBR 7286 - Power cables with extruded insulation of ethylene propylene rubber (EPR, HEPR or EPR 105) for voltages from 1 to 35 kV - Performance requirements.

ABNT NBR NM 280 - Conductors of insulated cables (IEC 60228, MOD).

Conditioning

In reels.

Nominal Dimensions

Section	Conductor	Insulation	Coverage	External	
	Nominal Diameter	Thickness	Thickness	Diameter	Weight
10	3,6	0,7	1,0	7,2	123
16	4,6	0,7	1,0	8,2	177
25	5,8	0,9	1,1	10,1	267
35	6,8	0,9	1,1	11,1	359
50	7,9	1,0	1,2	12,7	505
70	9,3	1,1	1,2	14,3	693
95	11,0	1,1	1,3	16,3	898
120	12,4	1,2	1,3	17,9	1132
150	13,7	1,4	1,4	19,9	1416
185	15,4	1,6	1,4	22,0	1703
240	17,7	1,7	1,5	24,8	2240
300	19,8	1,8	1,6	27,4	2768
400	22,4	2,0	1,7	30,7	3632
500	25,4	2,2	1,8	34,4	4558

Flex Cable PVC 1 kV



Application

The Conduspar Line of Flex Cables PVC 1 kV is suitable for residential, commercial and industrial electric installations, as well as for low voltage power distribution.

Construction

Conductor: bare electrolytic copper wires, soft hardness, stringing of class 5, acc. to NM 280.

Insulation: thermoplastic compound of PVC/A, fire retardant.

Conductor colors: black, blue, white and red - in increasing order of conductor quantity.

Coverage and fillings: thermoplastic compound of PVC/ST1, fire retardant.

Maximum Operating Temperatures

In continuous regime: 70°C

In overload: 100°C

In short circuit: 160°C

Reference Standards

NBR 7288 - Power cables with extruded solid insulation of polyvinylchloride (PVC) or polyethylene (PE) for voltages from 1 to 6 kV.

ABNT NBR NM 280 - Conductors of insulated cables (IEC 60228, MOD).

Conditioning

In reels.

Flex Cable PVC 1 kV

Nominal Dimensions

Unipolar Cable					
Section n	Conductor Diameter (mm)	Insulation Thickness (mm)	Coverage Thickness (mm)	External Diameter (mm)	Nominal Weight (kg/km)
1,5	1,51	0,8	0,9	5,1	37,9
2,5	1,96	0,8	0,9	5,6	49,4
4	2,48	1,0	1,0	6,6	74,3
6	3,03	1,0	1,0	7,2	95,1
10	3,99	1,0	1,0	8,2	138
16	5,01	1,0	1,0	9,4	194
25	6,19	1,2	1,1	11,1	289
35	7,37	1,2	1,1	12,4	383
50	8,86	1,4	1,2	14,5	540
70	10,6	1,4	1,3	16,4	725
95	12,15	1,6	1,3	18,6	950
120	13,95	1,6	1,4	20,5	1.185
150	16,1	1,8	1,5	23,4	1.480
185	17,2	2,0	1,5	25,0	1.785
240	20,2	2,2	1,7	28,8	2.350

2 Conductors					
Section n	Conductor Diameter (mm)	Insulation Thickness (mm)	Coverage Thickness (mm)	External Diameter (mm)	Nominal Weight (kg/km)
1,5	1,51	0,8	1,0	8,5	94,2
2,5	1,96	0,8	1,0	9,5	123
4	2,48	1,0	1,1	11,5	187
6	3,03	1,0	1,2	12,7	240
10	3,99	1,0	1,2	14,9	352
16	5,01	1,0	1,3	17,1	498
25	6,19	1,2	1,4	20,6	740
35	7,37	1,2	1,5	23,2	972
50	8,86	1,4	1,6	27,3	1.379
70	10,6	1,4	1,7	31,2	1.855
95	12,15	1,6	1,9	35,5	2.418
120	13,95	1,6	2,0	39,5	3.018
150	16,1	1,8	2,2	45,1	3.801
185	17,2	2,0	2,3	48,4	4.560
240	20,2	2,2	2,5	55,9	6.000

3 Conductors					
Section n	Conductor Diameter (mm)	Insulation Thickness (mm)	Coverage Thickness (mm)	External Diameter (mm)	Nominal Weight (kg/km)
1,5	1,51	0,8	1,0	9,1	113
2,5	1,96	0,8	1,1	10,1	156
4	2,48	1,0	1,1	12,3	231
6	3,03	1,0	1,2	13,6	306
10	3,99	1,0	1,3	15,9	446
16	5,01	1,0	1,3	18,3	640
25	6,19	1,2	1,4	22,1	957
35	7,37	1,2	1,5	24,9	1.281
50	8,86	1,4	1,7	29,4	1.803
70	10,6	1,4	1,8	33,5	2.440
95	12,15	1,6	2,0	38,2	3.205
120	13,95	1,6	2,1	42,5	4.007
150	16,1	1,8	2,3	48,5	5.028
185	17,2	2,0	2,4	52,1	6.054
240	20,2	2,2	2,7	60,2	7.992

2 Conductors					
Section n	Conductor Diameter (mm)	Insulation Thickness (mm)	Coverage Thickness (mm)	External Diameter (mm)	Nominal Weight (kg/km)
1,5	1,51	0,8	1,1	9,9	143
2,5	1,96	0,8	1,1	11,1	191
4	2,48	1	1,2	13,5	292
6	3,03	1	1,2	15	380
10	3,99	1	1,3	17,6	568
16	5,01	1	1,4	20,3	807
25	6,19	1,2	1,5	24,5	1.222
35	7,37	1,2	1,6	27,6	1.639
50	8,86	1,4	1,8	32,6	2.310
70	10,6	1,4	1,9	37,2	3.130
95	12,15	1,6	2,1	42,4	4.111
120	13,95	1,6	2,2	47,2	5.142
150	16,1	1,8	2,5	54	6.471
185	17,2	2	2,6	58	7.795
240	20,2	2,2	2,9	67	10.285

XLPE Cable 1 kV



Application

The Conduspar Line of XLPE Cables 1 kV is suitable for underground energy distribution. Despite not having a cover layer, the XLPE insulation layer has sufficient thickness to impart electrical insulation, mechanical resistance and excellent tolerance to contact with humidity.

Construction

Conductor: bare electrolytic copper wires, soft hardness, stringing of class 5, acc. to NM 280.

Insulation: thermoplastic compound of PVC/A, fire retardant.

Conductor colors: black, blue, white and red - in increasing order of conductor quantity.

Coverage and fillings: thermoplastic compound of PVC/ST1, fire retardant.

Maximum Operating Temperatures

In continuous regime: 70°C

In overload: 100°C

In short circuit: 160°C

Reference Standards

NBR 7288 - Power cables with extruded solid insulation of polyvinylchloride (PVC) or polyethylene (PE) for voltages of 1 a 6 kV.

ABNT NBR NM 280 - Conductors of insulated cables (IEC 60228, MOD).

Conditioning

In reels.

Nominal Dimensions

Section	Unipolar Cables			Triplex Cables		
	Conductor Diameter	Insulation Thickness	External Diameter	Nominal Weight	Wiring Diameter	Nominal Weight
(mm ²)	(mm)	(mm)	(mm)			
1,5	1,59	1,2	4,1	25,0	8,8	75,7
2,5	2,08	1,2	4,6	36,7	9,9	111
4	2,60	1,2	5,1	52,6	11,1	159
6	3,14	1,2	5,7	71,9	12,3	218
10	3,74	1,6	7,1	120	15,4	364
16	4,69	1,6	8,0	180	17,5	545
25	5,89	1,6	9,3	265	20,1	803
35	6,95	1,6	10,4	360	22,5	1.091
50	8,15	2,0	12,4	490	26,9	1.485
70	9,55	2,0	13,8	685	30,0	2.076
95	11,33	2,0	15,6	935	33,9	2.833
120	12,85	2,4	18,0	1.185	39,1	3.591
150	14,00	2,4	19,2	1.435	41,6	4.348
185	15,78	2,4	21,0	1.785	45,6	5.409
240	18,15	2,4	23,4	2.325	50,8	7.045
300	20,15	2,8	26,3	2.915	57,0	8.832
400	22,99	2,8	29,2	3.685	63,3	11.166
500	26,45	2,8	32,7	4.680	70,9	14.180

Control Cable



Application

The Conduspar Line of Control Cables is suitable for command and control circuits.

Construction

Conductor: bare electrolytic copper wires, soft hardness, stringing of class 5, acc. to NM 280.

Insulation: thermoplastic compound of PVC/A, fire retardant.

Identification: numbered black conductors.

Separator: polyester tape.

Coverage and fillings: thermoplastic compound of PVC/ST1, fire retardant.

Maximum Operating Temperature

In continuous regime: 70°C

Reference Standards

NBR 7289 - Control cables with insulation extruded in PE or PVC for voltages up to 1 kV - Performance requirements.

ABNT NBR NM 280 - Conductors of insulated cables (IEC 60228, MOD).

Conditioning

In reels.

Nominal Dimensions

Quantity of Conductors	Section (mm ²)	Conductor Diameter (mm)	Insulation		Coverage		Nominal Weight (kg/km)
			Thickness (mm)	Diameter (mm)	Thickness (mm)	Diameter (mm)	
2	0,5	0,91	0,6	2,2	1,0	6,5	42,3
	0,75	1,12	0,6	2,4	1,0	6,9	54,2
	1	1,29	0,6	2,5	1,0	7,3	61,8
	1,5	1,51	0,8	3,2	1,0	8,7	86,5
	2,5	1,96	0,8	3,6	1,1	9,7	114
	4	2,48	1,0	4,6	1,1	11,8	173
	6	3,03	1,0	5,1	1,2	13,1	227
	10	3,99	1,0	6,1	1,2	15,3	332
3	0,5	0,91	0,6	2,2	1,0	6,8	54,5
	0,75	1,12	0,6	2,4	1,0	7,4	65,4
	1	1,29	0,6	2,5	1,0	7,8	75,3
	1,5	1,51	0,8	3,2	1,0	9,3	107
	2,5	1,96	0,8	3,6	1,1	10,4	148
	4	2,48	1,0	4,6	1,1	12,6	225
	6	3,03	1,0	5,1	1,2	14,0	292
	10	3,99	1,0	6,1	1,3	16,3	437

Control Cable

Nominal Dimensions

Quantity of Conductors	Section (mm ²)	Conductor Diameter (mm)	Insulation		Coverage		Nominal Weight (kg/km)
			Thickness (mm)	Diameter (mm)	Thickness (mm)	Diameter (mm)	
4	0,5	0,91	0,6	2,2	1,0	7,4	65,3
	0,75	1,12	0,6	2,4	1,0	8,0	79
	1	1,29	0,6	2,5	1,0	8,5	91,7
	1,5	1,51	0,8	3,2	1,1	10,2	136
	2,5	1,96	0,8	3,6	1,1	11,4	183
	4	2,48	1,0	4,6	1,2	13,9	279
	6	3,03	1,0	5,1	1,2	15,4	366
	10	3,99	1,0	6,1	1,3	18,0	556
5	0,5	0,91	0,6	2,2	1,0	8,1	79,6
	0,75	1,12	0,6	2,4	1,0	8,8	96,7
	1	1,29	0,6	2,5	1,0	9,3	113
	1,5	1,51	0,8	3,2	1,1	11,2	167
	2,5	1,96	0,8	3,6	1,1	12,6	228
	4	2,48	1,0	4,6	1,2	15,4	348
	6	3,03	1,0	5,1	1,3	17,1	465
	10	3,99	1,0	6,1	1,4	20,0	710
7	0,5	0,91	0,6	2,2	1,0	8,8	96,5
	0,75	1,12	0,6	2,4	1,0	9,6	119
	1	1,29	0,6	2,5	1,1	10,1	140
	1,5	1,51	0,8	3,2	1,1	12,3	208
	2,5	1,96	0,8	3,6	1,2	13,8	292
	4	2,48	1,0	4,6	1,3	16,9	448
	6	3,03	1,0	5,1	1,3	18,8	595
	10	3,99	1,0	6,1	1,4	22,1	990
9	0,5	0,91	0,6	2,2	1,1	10,8	127
	0,75	1,12	0,6	2,4	1,1	11,7	161
	1	1,29	0,6	2,5	1,1	12,4	189
	1,5	1,51	0,8	3,2	1,2	15,1	281
	2,5	1,96	0,8	3,6	1,3	17,0	386
	4	2,48	1,0	4,6	1,4	21,0	605
	6	3,03	1,0	5,1	1,5	23,4	795
	10	3,99	1,0	6,1	1,6	27,4	1190
12	0,5	0,91	0,6	2,2	1,1	11,6	156
	0,75	1,12	0,6	2,4	1,1	12,6	194
	1	1,29	0,6	2,5	1,2	13,4	234
	1,5	1,51	0,8	3,2	1,3	16,3	341
	2,5	1,96	0,8	3,6	1,3	18,5	481
	4	2,48	1,0	4,6	1,5	22,8	750
	6	3,03	1,0	5,1	1,5	25,4	1.010
	10	3,99	1,0	6,1	1,6	29,4	1500
15	0,5	0,91	0,6	2,2	1,2	12,9	196
	0,75	1,12	0,6	2,4	1,2	14,0	248
	1	1,29	0,6	2,5	1,2	14,9	290
	1,5	1,51	0,8	3,2	1,3	18,3	436
	2,5	1,96	0,8	3,6	1,4	20,7	620
20	0,5	0,91	0,6	2,2	1,2	14,4	252
	0,75	1,12	0,6	2,4	1,2	15,7	314
	1	1,29	0,6	2,5	1,3	16,7	379
	1,5	1,51	0,8	3,2	1,4	20,5	570
	2,5	1,96	0,8	3,6	1,5	23,2	790
25	0,5	0,91	0,6	2,2	1,3	16,0	294
	0,75	1,12	0,6	2,4	1,3	17,5	376
	1	1,29	0,6	2,5	1,3	18,6	446
	1,5	1,51	0,8	3,2	1,5	22,8	670
	2,5	1,96	0,8	3,6	1,6	25,9	950

Shielded Control Cable



Application

The Conduspar Line of Shielded Control Cables is suitable for command and control circuits, in locals with high electromagnetic interference, such as substations and industrial installations.

Construction

Conductor: bare electrolytic copper wires, soft hardness, stringing of class 5, acc. to NM 280.

Insulation: thermoplastic compound of PVC/A, fire retardant.

Identification: numbered black conductors.

Separator: polyester tape.

Metallic shielding: bare copper tape, with minimal overlap of 10%.

Coverage and fillings: thermoplastic compound of PVC/ST1, fire retardant.

Maximum Operating Temperature

In continuous regime: 70°C

Reference Standards

NBR 7289 - Control cables with insulation extruded in PE or PVC for voltages up to 1 kV - Performance requirements.

ABNT NBR NM 280 - Conductors of insulated cables (IEC 60228, MOD).

Conditioning

In reels.

Nominal Dimensions

Quantity of Conductors	Section (mm ²)	Conductor Diameter (mm)	Insulation		Coverage		Nominal Weight (kg/km)
			Thickness (mm)	Diameter (mm)	Thickness (mm)	Diameter (mm)	
2	0,5	0,91	0,6	2,2	1,0	9,6	120
	0,75	1,12	0,6	2,4	1,1	10,0	133
	1	1,29	0,6	2,5	1,1	10,4	144
	1,5	1,51	0,8	3,2	1,1	11,8	181
	2,5	1,96	0,8	3,6	1,2	12,9	219
	4	2,48	1,0	4,6	1,2	14,9	290
	6	3,03	1,0	5,1	1,3	16,2	350
3	10	3,99	1,0	6,1	1,3	18,4	452
	0,5	0,91	0,6	2,2	1,1	10,0	132
	0,75	1,12	0,6	2,4	1,1	10,5	147
	1	1,29	0,6	2,5	1,1	10,9	161
	1,5	1,51	0,8	3,2	1,1	12,4	206
	2,5	1,96	0,8	3,6	1,2	13,5	253
	4	2,48	1,0	4,6	1,2	15,8	343
4	6	3,03	1,0	5,1	1,3	17,1	421
	10	3,99	1,0	6,1	1,4	19,5	580
	0,5	0,91	0,6	2,2	1,1	10,6	148
	0,75	1,12	0,6	2,4	1,1	11,1	167
	1	1,29	0,6	2,5	1,1	11,6	183
	1,5	1,51	0,8	3,2	1,2	13,3	238
	2,5	1,96	0,8	3,6	1,2	14,5	297
4	4	2,48	1,0	4,6	1,3	17,0	408
	6	3,03	1,0	5,1	1,3	18,5	507
	10	3,99	1,0	6,1	1,4	21,2	709

Shielded Control Cable

Nominal Dimensions

Quantitv of Conductors	Section (mm ²)	Conductor Diameter (mm)	Insulation		Coverage		Nominal Weight (kg/km)
			Thickness (mm)	Diameter (mm)	Thickness (mm)	Diameter (mm)	
5		0,91	0,6	2,2	1,1	11,2	168
	0,75	1,12	0,6	2,4	1,1	11,9	191
	1	1,29	0,6	2,5	1,1	12,4	212
	1,5	1,51	0,8	3,2	1,2	14,3	279
	2,5	1,96	0,8	3,6	1,2	15,7	351
	4	2,48	1,0	4,6	1,3	18,5	489
	6	3,03	1,0	5,1	1,4	20,2	615
7	10	3,99	1,0	6,1	1,5	23,1	865
	0,5	0,91	0,6	2,2	1,1	12,0	192
	0,75	1,12	0,6	2,4	1,1	12,7	215
	1	1,29	0,6	2,5	1,2	13,3	246
	1,5	1,51	0,8	3,2	1,2	15,4	328
	2,5	1,96	0,8	3,6	1,3	16,9	420
	4	2,48	1,0	4,6	1,4	20,0	595
9	6	3,03	1,0	5,1	1,4	21,9	755
	10	3,99	1,0	6,1	1,5	25,2	1085
	0,5	0,91	0,6	2,2	1,2	13,9	239
	0,75	1,12	0,6	2,4	1,2	14,8	276
	1	1,29	0,6	2,5	1,2	15,5	309
	1,5	1,51	0,8	3,2	1,3	18,2	418
	2,5	1,96	0,8	3,6	1,4	20,1	540
12	4	2,48	1,0	4,6	1,5	24,1	770
	6	3,03	1,0	5,1	1,6	26,5	980
	0,5	0,91	0,6	2,2	1,2	14,7	271
	0,75	1,12	0,6	2,4	1,2	15,7	316
	1	1,29	0,6	2,5	1,3	16,5	357
	1,5	1,51	0,8	3,2	1,4	19,5	488
	2,5	1,96	0,8	3,6	1,4	21,6	640
15	4	2,48	1,0	4,6	1,6	25,9	945
	6	3,03	1,0	5,1	1,6	28,5	200
	0,5	0,91	0,6	2,2	1,3	16,0	319
	0,75	1,12	0,6	2,4	1,3	17,2	375
	1	1,29	0,6	2,5	1,3	18,1	425
	1,5	1,51	0,8	3,2	1,4	21,4	592
	2,5	1,96	0,8	3,6	1,5	23,8	782
20	0,5	0,91	0,6	2,2	1,3	17,5	382
	0,75	1,12	0,6	2,4	1,3	18,8	455
	1	1,29	0,6	2,5	1,4	19,8	521
	1,5	1,51	0,8	3,2	1,5	23,6	720
	2,5	1,96	0,8	3,6	1,6	26,3	985
25	0,5	0,91	0,6	2,2	1,3	19,1	437
	0,75	1,12	0,6	2,4	1,4	20,6	522
	1	1,29	0,6	2,5	1,4	21,7	605
	1,5	1,51	0,8	3,2	1,6	26,0	860
	2,5	1,96	0,8	3,6	1,7	29,0	155

Cable for Frequency Converter 1 kV



Application

The Conduspar Line of Cables for Frequency Converter 1 kV is the ideal solution for connection and control of machines by frequency converters. This cable contains in its structure all the necessary components of the circuit: three phases, neutral conductor in concentric formation, with reduced section and the metallic shielding, to prevent the proliferation of noises in the adjacent circuits.

Construction

Conductor: bare electrolytic copper wires, soft hardness, stringing of class 5, acc. to NM 280.

Insulation: thermosetting compound of HEPR - ethylene propylene rubber.

Conductor colors: black, blue, white and red - in increasing order of conductor quantity.

Concentric conductor: with electrolytic copper wires applied helicoidally, with section reduced by 50% from phase conductor, for sections greater than 16 mm².

Metallic shielding: bare copper tape, with minimal overlap of 10%.

Coverage and fillings: thermoplastic compound of PVC/ST2.

Maximum Operating Temperatures

In continuous regime: 90°C

In overload: 130°C

In short circuit: 250°C

Reference Standards

ABNT NBR 7286 - Power cables with extruded insulation of ethylene propylene rubber (EPR) for voltages from 1 to 35 kV - Performance requirements.

ABNT NBR 6251 - Power cables with extruded insulation for voltages from 1 to 35 kV - Construction requirements.

ABNT NBR NM 280 - Conductors of insulated cables (IEC 60228, MOD).

Conditioning

In reels.

Nominal Dimensions

Formation	Diameter Conductor Phase (mm)	Insulation		Coverage		Nominal Weight (kg/km)
		Thickness (mm)	Diameter (mm)	Thickness (mm)	Diameter (mm)	
3x2,5+2,5	1,96	0,7	4,8	1,4	13,2	253
3x4+4	2,48	0,7	5,3	1,4	14,5	327
3x6+6	3,03	0,7	5,8	1,4	16,0	430
3x10+10	3,99	0,7	6,8	1,4	18,5	615
3x16+16	5,01	0,7	7,9	1,4	21,0	853
3x25+16	6,19	0,9	9,3	1,4	24,4	161
3x35+16	7,37	0,9	10,5	1,5	27,2	492
3x50+25	8,86	1,0	12,1	1,6	31,6	086
3x70+35	10,60	1,1	14,0	1,8	37,1	884
3x95+50	12,15	1,1	15,6	1,9	41,3	728
3x120+70	13,95	1,2	17,5	2,0	46,9	782
3x150+70	16,10	1,4	19,9	2,2	53,5	070
3x185+95	17,20	1,6	21,2	2,4	57,2	088
3x240+120	20,20	1,7	24,4	2,8	4	295

Instrumentation Cable 300 V BC



Application

The Conduspar Line of Instrumentation Cables 300 V BC is suitable for reading of analog signals from instruments of industrial applications and communication in special circuits. The collective shielding is a basic protection against external interference.

Construction

Conductor: bare electrolytic copper wires, stringing of class 2, acc. to NM 280.

Insulation: thermoplastic compound of PVC/E, fire retardant.

Identification: 2 conductors in black and white; 3 conductors in black, white and red; numbered elements; separator in non-hygroscopic tape.

Collective shielding: aluminized polyester tape, with drain conductor in tinned copper of 0,5 mm².

Coverage: thermoplastic compound of PVC/ST2, fire retardant.

Maximum Operating Temperatures

Continuous regime: 105°C

Reference Standards

ABNT NBR 10300 - Instrumentation cables with extruded insulation of PE or PVC for voltages up to 300 V - Performance requirements.

ABNT NBR NM 280 - Conductors of insulated cables (IEC 60228, MOD).

Conditioning

In reels.

Instrumentation Cable 300 V BC

Nominal Dimensions

Element Quantity	Nominal Section (mm ²)	Insulation Thickness (mm)	2 Conductors			3 Conductors				
			Coverage Thickness (mm)	External Diameter (mm)	Nominal Weight (kg/km)	Coverage Thickness (mm)	External Diameter (mm)	Nominal Weight (kg/km)		
1	0,5	0,4	0,9	5,6	44,9	0,9	5,9	51,8		
2			0,9	6,3	60,8	1,0	8,0	85,4		
3			1,0	9,2	91,3	1,0	9,3	113		
4			1,0	9,5	107	1,1	10,6	143		
6			1,1	10,9	145	1,1	12,4	194		
8			1,1	12,1	179	1,2	14,1	252		
10			1,1	13,3	213	1,2	15,5	301		
12			1,2	14,5	253	1,2	16,7	349		
1			0,75	0,4	0,9	6,0	53,0	0,9	6,3	62,3
2					1,0	7,0	77,2	1,0	8,7	105
3					1,0	10,0	111	1,1	10,3	145
4					1,1	10,6	137	1,1	11,5	179
6	1,1	11,8			180	1,2	13,8	252		
8	1,1	13,3			226	1,2	15,5	320		
10	1,2	14,7			277	1,2	17,2	393		
12	1,2	15,9			321	1,3	18,5	458		
1	1,0	0,4			1,0	6,7	65,2	1,0	7,0	77,1
2					1,0	7,6	92,0	1,0	9,4	126
3					1,1	11,0	138	1,1	11,2	176
4					1,1	11,5	165	1,1	12,5	218
6			1,1	12,9	220	1,2	15,0	310		
8			1,2	14,7	284	1,2	16,9	396		
10			1,2	16,1	341	1,3	18,8	486		
12			1,2	17,4	396	1,3	20,3	569		
1			1,5	0,4	1,0	7,2	79,6	1,1	7,9	99,7
2					1,0	8,2	116	1,1	10,7	166
3					1,1	12,0	175	1,1	12,5	227
4					1,1	12,5	212	1,2	14,2	291
6	1,2	14,3			293	1,2	16,8	408		
8	1,2	16,1			372	1,3	19,2	533		
10	1,3	17,9			457	1,4	21,3	656		
12	1,3	19,3			537	1,4	23,0	769		
1	2,5	0,4			1,1	9,2	126	1,1	9,7	154
2					1,1	10,6	188	1,2	13,6	269
3					1,2	15,8	282	1,3	16,2	380
4					1,2	16,4	345	1,3	18,3	477
6			1,3	18,8	480	1,4	22,0	684		
8			1,4	21,5	622	1,5	25,2	901		
10			1,4	23,6	753	1,6	27,9	1.106		
12			1,5	25,8	901	1,7	30,5	1.314		

Instrumentation Cable 300 V BIC



Application

The Conduspar Line of Instrumentation Cables 300 V BIC is suitable for reading of analog signals from instruments of industrial applications and communication in special circuits. The individual and collective shielding set is a protection for 2 or 3 conductors against external interference and other signals into the cable.

Construction

Conductor: bare electrolytic copper wires, stringing of class 2, acc. to NM 280.

Insulation: thermoplastic compound of PVC/E, fire retardant.

Identification: 2 conductors in black and white; 3 conductors in black, white and red; numbered elements; separator in non-hygroscopic tape.

Individual shielding: aluminized polyester tape, with minimal overlap of 25%, 100% of coverage and drain conductor in tinned copper of 0,5 mm².

Collective shielding: aluminized polyester tape, with minimal overlap of 25%, 100% of coverage and drain conductor in tinned copper of 0,5 mm².

Coverage: thermoplastic compound of PVC/ST2, fire retardant, in black.

Maximum Operating Temperatures

Continuous regime: 105°C

Reference Standards

ABNT NBR 10300 - Instrumentation cables with extruded insulation of PE or PVC for voltages up to 300 V - Performance requirements.

ABNT NBR NM 280 - Conductors of insulated cables (IEC 60228, MOD).

Conditioning

In reels.

Instrumentation Cable 300 V BIC

Nominal Dimensions

Elements Quantity	Nominal Section (mm ²)	Insulation Thickness (mm)	2 Conductors			3 Conductors				
			Coverage Thickness (mm)	External Diameter (mm)	Nominal Weight (kg/km)	Coverage Thickness (mm)	External Diameter (mm)	Nominal Weight (kg/km)		
2	0,5	0,4	0,9	6,3	72,4	1,0	8,2	98,2		
3			1,0	9,4	110,0	1,0	9,4	132,0		
4			1,0	9,8	132,0	1,1	10,9	171		
6			1,1	11,2	184	1,1	12,7	232		
8			1,1	12,5	229	1,2	14,4	302		
10			1,2	13,9	281	1,2	15,8	363		
12			1,2	15,0	328	1,3	17,3	432		
2			0,75	0,4	1,0	7,0	89,4	1,0	8,8	118,0
3					1,1	10,5	136,0	1,0	10,2	160
4					1,1	10,9	163	1,1	11,9	206
6					1,1	12,2	219	1,1	13,8	285
8					1,2	13,9	283	1,2	15,8	372
10	1,2	15,2			341	1,2	17,3	449		
12	1,2	16,4			399	1,3	18,9	535		
2	1,0	0,4			1,0	7,6	105,0	1,0	9,6	140,0
3					1,1	11,3	159,0	1,1	11,3	196
4					1,1	11,8	192	1,1	12,9	246
6					1,1	13,3	263	1,2	15,3	350
8					1,2	15,1	341	1,2	17,3	449
10			1,2	16,6	411	1,3	19,2	553		
12			1,3	18,1	491	1,3	20,7	648		
2			1,5	0,4	1,0	8,2	129,0	1,1	10,6	180,0
3					1,1	12,4	196,0	1,1	12,4	248
4					1,1	12,9	240	1,2	14,4	320
6					1,2	14,8	335	1,2	16,8	450
8					1,2	16,6	427	1,3	19,2	589
10	1,3	18,5			526	1,4	21,3	725		
12	1,3	19,9			619	1,4	23,1	852		
2	2,5	0,4			1,1	10,6	202	1,2	13,9	285
3					1,2	16,3	307	1,2	16,2	396
4					1,2	17,0	377	1,3	18,9	511
6					1,3	19,4	528	1,4	22,5	732
8					1,4	22,2	685	1,5	25,6	959
10			1,5	24,6	843	1,6	28,5	1179		
12			1,5	26,7	993	1,7	31,1	1.402		

Cable MTS105



Application

The Conduspar Line of Cables MTS105 is suitable for power distribution circuits in medium voltage up to 35 kV. MTS105 cables are the best solution for medium voltage connections of consumers with large size, condominiums and industries. The EPR105, insulating material used in the MTS105 line, brings together the maximum current capacity and the most optimized construction

Construction

Conductor: bare electrolytic copper wires, soft hardness, stringing of class 2 compact, acc. to NM 280.

Conductor shielding: semiconductive thermosetting compound.

Insulation: thermosetting compound of EPR105 (ethylene propylene rubber), with coordinated, extruded and vulcanized thickness simultaneously with the semiconductive shieldings.

Insulation shielding: semiconductive thermosetting compound, with ease cold extraction.

Metallic shielding: bare copper wiring crown, effective section of 6,5 mm².

Coverage: thermoplastic compound of PVC/ST2 in black.

Voltage classes

3,6/6 kV, 6/10 kV, 8,7/15 kV, 12/20 kV, 15/25 kV and 20/35 kV

Maximum Operating Temperatures

In continuous regime: 105°C

In overload: 140°C

In short circuit: 250°C

Reference Standards

ABNT NBR 7286 - Power cables with extruded insulation of ethylene propylene rubber (EPR) for voltages from 1 to 35 kV - Performance requirements.

ABNT NBR NM 280 - Conductors of insulated cables (IEC 60228, MOD).

Conditioning

In reels.

Cable MTS105

Nominal Dimensions

Unipolar Cables 3,6/6 kV						
Conductor		Insulation		Coverage		Nominal Weight (kg/km)
Section n	Diameter (mm)	Thickness (mm)	Diameter (mm)	Thickness (mm)	Diameter (mm)	
10	3,74	2,5	9,94	1,2	15,7	360
16	4,69	2,5	10,89	1,2	16,8	440
25	5,89	2,5	12,09	1,3	18,1	535
35	6,95	2,5	13,15	1,3	19,3	670
50	8,15	2,5	14,35	1,3	20,6	785
70	9,55	2,5	15,75	1,4	22,2	995
95	11,33	2,5	17,53	1,5	24,2	1.275
120	12,85	2,5	19,05	1,5	25,9	1.535
150	14,00	2,5	20,2	1,5	27,1	1.860
185	15,78	2,5	21,98	1,6	29,1	2.180
240	18,15	2,8	24,95	1,7	32,4	2.782
300	20,15	2,8	26,95	1,8	34,7	3.305
400	22,99	2,8	29,79	1,9	37,8	4.125
500	26,45	2,8	33,25	2,0	41,7	5.180

Unipolar Cables 12/20 kV						
Conductor		Insulation		Coverage		Nominal Weight (kg/km)
Section n	Diameter (mm)	Thickness (mm)	Diameter (mm)	Thickness (mm)	Diameter (mm)	
16	4,69	5,2	16,29	1,4	22,8	630
25	5,89	4,7	16,49	1,4	23,0	740
35	6,95	4,0	16,15	1,4	22,6	770
50	8,15	4,0	17,35	1,4	24,0	985
70	9,55	4,0	18,75	1,5	25,5	1.225
95	11,33	4,0	20,53	1,6	27,5	1.510
120	12,85	4,0	22,05	1,6	29,2	1.790
150	14,00	4,0	23,2	1,7	30,5	2.075
185	15,78	4,0	24,98	1,7	32,5	2.460
240	18,15	4,5	28,35	1,8	36,2	3.070
300	20,15	4,5	30,35	1,9	38,4	3.610
400	22,99	4,5	33,19	2,0	41,6	4.585
500	26,45	4,5	36,65	2,1	45,4	5.690

Unipolar Cables 6/10 kV						
Conductor		Insulation		Coverage		Nominal Weight (kg/km)
Section n	Diameter (mm)	Thickness (mm)	Diameter (mm)	Thickness (mm)	Diameter (mm)	
16	4,69	2,5	10,89	1,2	16,8	440
25	5,89	2,5	12,09	1,3	18,1	535
35	6,95	2,5	13,15	1,3	19,3	670
50	8,15	2,5	14,35	1,3	20,6	805
70	9,55	2,5	15,75	1,4	22,2	995
95	11,33	2,5	17,53	1,5	24,2	1.275
120	12,85	2,5	19,05	1,5	25,9	1.535
150	14,00	2,5	20,2	1,5	27,1	1.860
185	15,78	2,5	21,98	1,6	29,1	2.180
240	18,15	2,8	24,95	1,7	32,4	2.782
300	20,15	2,8	26,95	1,8	34,7	3.305
400	22,99	2,8	29,79	1,9	37,8	4.125
500	26,45	2,8	33,25	2,0	41,7	5.180

Unipolar Cables 15/25 kV						
Conductor		Insulation		Coverage		Nominal Weight (kg/km)
Section n	Diameter (mm)	Thickness (mm)	Diameter (mm)	Thickness (mm)	Diameter (mm)	
35	6,95	6,2	20,55	1,6	27,5	985
50	8,15	5,5	20,35	1,6	27,3	1.065
70	9,55	5,5	21,75	1,6	28,9	1.350
95	11,33	5,5	23,53	1,7	30,8	1.600
120	12,85	5,5	25,05	1,7	32,5	1.880
150	14,00	5,5	26,2	1,8	33,8	2.175
185	15,78	5,5	27,98	1,8	35,8	2.565
240	18,15	5,0	29,35	1,9	37,3	3.080
300	20,15	5,0	31,35	1,9	39,5	3.670
400	22,99	5,0	34,19	2,0	42,7	4.555
500	26,45	5,0	37,65	2,2	46,6	5.780

Unipolar Cables 8,7/15 kV						
Conductor		Insulation		Coverage		Nominal Weight (kg/km)
Section n	Diameter (mm)	Thickness (mm)	Diameter (mm)	Thickness (mm)	Diameter (mm)	
25	5,89	3,0	13,09	1,3	19,2	575
35	6,95	3,0	14,15	1,3	20,4	685
50	8,15	3,0	15,35	1,4	21,7	820
70	9,55	3,0	16,75	1,4	23,3	1.045
95	11,33	3,0	18,53	1,5	25,3	1.320
120	12,85	3,0	20,05	1,5	27,0	1.580
150	14,00	3,0	21,2	1,6	28,3	1.860
185	15,78	3,0	22,98	1,6	30,2	2.235
240	18,15	3,5	26,35	1,8	34,0	2.870
300	20,15	3,5	28,35	1,8	36,2	3.450
400	22,99	3,5	31,19	1,9	39,4	4.415
500	26,45	3,5	34,65	2,1	43,2	5.500

Unipolar Cables 20/35 kV						
Conductor		Insulation		Coverage		Nominal Weight (kg/km)
Section n	Diameter (mm)	Thickness (mm)	Diameter (mm)	Thickness (mm)	Diameter (mm)	
50	8,15	8,2	25,75	1,7	33,3	1.340
70	9,55	7,5	25,75	1,7	33,4	1.550
95	11,33	7,5	27,53	1,8	35,3	1.930
120	12,85	7,5	29,05	1,9	37,0	2.215
150	14,00	7,5	30,2	1,9	38,3	2.540
185	15,78	6,5	29,98	1,9	38,0	2.775
240	18,15	6,5	32,35	2,0	40,7	3.405
300	20,15	6,5	34,35	2,0	42,9	3.945
400	22,99	6,5	37,19	2,1	46,0	4.495
500	26,45	6,5	40,65	2,3	49,9	5.925

Cable MTX



Application

The Conduspar Line of Cables MTX is suitable for power distribution circuits in medium voltage up to 35 kV.

Construction

Conductor: bare electrolytic copper wires, soft hardness, stringing of class 2 compact, acc. to NM 280.

Conductor shielding: semiconductive thermosetting compound.

Insulation: thermosetting compound of extruded and vulcanized XLPE (reticular polyethylene) simultaneously with the semiconductive shieldings.

Insulation shielding: semiconductive thermosetting compound, with ease cold extraction.

Metallic shielding: bare copper wiring crown, effective section of 6,5 mm².

Coverage: thermoplastic compound of PVC/ST2 in black.

Voltage classes

3,6/6 kV, 6/10 kV, 8,7/15 kV, 12/20 kV, 15/25 kV and 20/35 kV

Maximum Operating Temperatures

In continuous regime: 90°C

In overload: 130°C

In short circuit: 250°C

Reference Standards

NBR 7287 - Power cables with solid extruded insulation of reticular polyethylene (XLPE) for insulation voltages from 1 to 35 kV - Performance requirements.

ABNT NBR NM 280 - Conductors of insulated cables (IEC 60228, MOD).

Conditioning

In reels.

Cable MTX

Nominal Dimensions

Unipolar Cables 3,6/6 kV						
Conductor		Insulation		Coverage		Nominal Weight (kg/km)
Section n	Diameter (mm)	Thickness (mm)	Diameter (mm)	Thickness (mm)	Diameter (mm)	
10	3,74	2,5	9,94	1,2	15,7	325
16	4,69	2,5	10,89	1,2	16,8	395
25	5,89	2,5	12,09	1,3	18,1	505
35	6,95	2,5	13,15	1,3	19,3	610
50	8,15	2,5	14,35	1,3	20,6	745
70	9,55	2,5	15,75	1,4	22,2	960
95	11,33	2,5	17,53	1,5	24,2	1.235
120	12,85	2,5	19,05	1,5	25,9	1.485
150	14,00	2,5	20,20	1,5	27,1	1.775
185	15,78	2,5	21,98	1,6	29,1	2.135
240	18,15	2,6	24,55	1,7	32,0	2.705
300	20,15	2,8	26,95	1,8	34,7	3.265
400	22,99	3,0	30,19	1,9	38,3	4.185
500	26,45	3,2	34,05	2,0	42,6	5.260

Unipolar Cables 12/20 kV						
Conductor		Insulation		Coverage		Nominal Weight (kg/km)
Section n	Diameter (mm)	Thickness (mm)	Diameter (mm)	Thickness (mm)	Diameter (mm)	
35	6,95	5,5	19,15	1,5	26,0	825
50	8,15	5,5	20,35	1,6	27,3	970
70	9,55	5,5	21,75	1,6	28,9	1.200
95	11,33	5,5	23,53	1,7	30,8	1.495
120	12,85	5,5	25,05	1,7	32,5	1.760
150	14,00	5,5	26,2	1,8	33,8	2.065
185	15,78	5,5	27,98	1,8	35,8	2.440
240	18,15	5,5	30,35	1,9	38,4	3.025
300	20,15	5,5	32,35	2,0	40,7	3.585
400	22,99	5,5	35,19	2,1	43,8	4.505
500	26,45	5,5	38,65	2,2	47,7	5.580

Unipolar Cables 6/10 kV						
Conductor		Insulation		Coverage		Nominal Weight (kg/km)
Section n	Diameter (mm)	Thickness (mm)	Diameter (mm)	Thickness (mm)	Diameter (mm)	
16	4,69	3,4	12,69	1,3	18,8	455
25	5,89	3,4	13,89	1,3	20,1	555
35	6,95	3,4	14,95	1,4	21,3	670
50	8,15	3,4	16,15	1,4	22,6	805
70	9,55	3,4	17,55	1,5	24,2	1.025
95	11,33	3,4	19,33	1,5	26,2	1.305
120	12,85	3,4	20,85	1,6	27,9	1.560
150	14,00	3,4	22	1,6	29,1	1.855
185	15,78	3,4	23,78	1,7	31,1	2.220
240	18,15	3,4	26,15	1,8	33,8	2.790
300	20,15	3,4	28,15	1,8	36,0	3.330
400	22,99	3,4	30,99	1,9	39,1	4.230
500	26,45	3,4	34,45	2,0	43,0	5.285

Unipolar Cables 15/25 kV						
Conductor		Insulation		Coverage		Nominal Weight (kg/km)
Section n	Diameter (mm)	Thickness (mm)	Diameter (mm)	Thickness (mm)	Diameter (mm)	
50	8,15	6,8	22,95	1,6	30,2	1.085
70	9,55	6,8	24,35	1,7	31,8	1.325
95	11,33	6,8	26,13	1,8	33,7	1.625
120	12,85	6,8	27,65	1,8	35,4	1.900
150	14,00	6,8	28,8	1,9	36,7	2.210
185	15,78	6,8	30,58	1,9	38,7	2.590
240	18,15	6,8	32,95	2,0	41,3	3.185
300	20,15	6,8	34,95	2,1	43,6	3.755
400	22,99	6,8	37,79	2,2	46,7	4.690
500	26,45	6,8	41,25	2,3	50,6	5.780

Unipolar Cables 8,7/15 kV						
Conductor		Insulation		Coverage		Nominal Weight (kg/km)
Section n	Diameter (mm)	Thickness (mm)	Diameter (mm)	Thickness (mm)	Diameter (mm)	
25	5,89	4,5	16,09	1,4	22,6	630
35	6,95	4,5	17,15	1,4	23,7	745
50	8,15	4,5	18,35	1,5	25,1	890
70	9,55	4,5	19,75	1,5	26,6	1.115
95	11,33	4,5	21,53	1,6	28,6	1.400
120	12,85	4,5	23,05	1,6	30,3	1.660
150	14,00	4,5	24,2	1,7	31,6	1.960
185	15,78	4,5	25,98	1,8	33,6	2.330
240	18,15	4,5	28,35	1,8	36,2	2.910
300	20,15	4,5	30,35	1,9	38,4	3.460
400	22,99	4,5	33,19	2,0	41,6	4.370
500	26,45	4,5	36,65	2,1	45,4	5.435

Unipolar Cables 20/35 kV						
Conductor		Insulation		Coverage		Nominal Weight (kg/km)
Section n	Diameter (mm)	Thickness (mm)	Diameter (mm)	Thickness (mm)	Diameter (mm)	
50	8,15	8,8	26,95	1,8	34,7	1.285
70	9,55	8,8	28,35	1,8	36,2	1.535
95	11,33	8,8	30,13	1,9	38,2	1.850
120	12,85	8,8	31,65	1,9	39,9	2.130
150	14,00	8,8	32,8	2,0	41,2	2.450
185	15,78	8,8	34,58	2,1	43,1	2.850
240	18,15	8,8	36,95	2,1	45,8	3.455
300	20,15	8,8	38,95	2,2	48,0	4.045
400	22,99	8,8	41,79	2,3	51,2	4.995
500	26,45	8,8	45,25	2,4	55,0	6.100

Cable MT105



Application

The Conduspar Line of Cables MT105 is suitable for power distribution circuits in medium voltage up to 35 kV with maximal current capacity provided by the insulation in EPR105.

Construction

Conductor: bare electrolytic copper wires, soft hardness, stringing of class 2 compact, acc. to NM 280.

Conductor shielding: semiconductive thermosetting compound.

Insulation: thermosetting compound of XLPE (reticular polyethylene), with full, extruded and vulcanized thickness, simultaneously with the semiconductive shieldings.

Insulation shielding: semiconductive thermosetting compound, with ease cold extraction.

Metallic shielding: bare copper wiring crown, effective section of 6,5 mm².

Coverage: thermoplastic compound of PVC/ST2 in black.

Voltage classes

3,6/6 kV, 6/10 kV, 8,7/15 kV, 12/20 kV, 15/25 kV and 20/35 kV

Maximum Operating Temperatures

In continuous regime: 90°C

In overload: 130°C

In short circuit: 250°C

Reference Standards

ABNT NBR 7286 - Power cables with extruded insulation de ethylene propylene rubber (EPR) for voltages from 1 to 35 kV - Performance requirements.

ABNT NBR NM 280 - Conductors of insulated cables (IEC 60228, MOD).

Conditioning

In reels.

Cable MT105

Nominal Dimensions

Unipolar Cables 3,6/6 kV						
Conductor		Insulation		Coverage		Nominal Weight (kg/km)
Section n	Diameter (mm)	Thickness (mm)	Diameter (mm)	Thickness (mm)	Diameter (mm)	
10	3,74	3,0	10,94	1,2	16,8	370
16	4,69	3,0	11,89	1,3	17,9	445
25	5,89	3,0	13,09	1,3	19,2	555
35	6,95	3,0	14,15	1,3	20,4	670
50	8,15	3,0	15,35	1,4	21,7	805
70	9,55	3,0	16,75	1,4	23,3	1030
95	11,33	3,0	18,53	1,5	25,3	1310
120	12,85	3,0	20,05	1,5	27,0	1570
150	14,00	3,0	21,20	1,6	28,3	1860
185	15,78	3,0	22,98	1,6	30,2	2225
240	18,15	3,0	25,35	1,7	32,9	2800
300	20,15	3,0	27,35	1,8	35,1	3345
400	22,99	3,0	30,19	1,9	38,3	4250
500	26,45	3,2	34,05	2,0	42,6	5335

Unipolar Cables 12/20 kV						
Conductor		Insulation		Coverage		Nominal Weight (kg/km)
Section n	Diameter (mm)	Thickness (mm)	Diameter (mm)	Thickness (mm)	Diameter (mm)	
35	6,95	5,5	19,15	1,5	26,0	880
50	8,15	5,5	20,35	1,6	27,3	1030
70	9,55	5,5	21,75	1,6	28,9	1270
95	11,33	5,5	23,53	1,7	30,8	1570
120	12,85	5,5	25,05	1,7	32,5	1845
150	14,00	5,5	26,2	1,8	33,8	2155
185	15,78	5,5	27,98	1,8	35,8	2535
240	18,15	5,5	30,35	1,9	38,4	3130
300	20,15	5,5	32,35	2,0	40,7	3700
400	22,99	5,5	35,19	2,1	43,8	4630
500	26,45	5,5	38,65	2,2	47,7	5715

Unipolar Cables 6/10 kV						
Conductor		Insulation		Coverage		Nominal Weight (kg/km)
Section n	Diameter (mm)	Thickness (mm)	Diameter (mm)	Thickness (mm)	Diameter (mm)	
16	4,69	3,4	12,69	1,3	18,8	470
25	5,89	3,4	13,89	1,3	20,1	585
35	6,95	3,4	14,95	1,4	21,3	700
50	8,15	3,4	16,15	1,4	22,6	840
70	9,55	3,4	17,55	1,5	24,2	1065
95	11,33	3,4	19,33	1,5	26,2	1350
120	12,85	3,4	20,85	1,6	27,9	1610
150	14,00	3,4	22	1,6	29,1	1905
185	15,78	3,4	23,78	1,7	31,1	2275
240	18,15	3,4	26,15	1,8	33,8	2850
300	20,15	3,4	28,15	1,8	36,0	3400
400	22,99	3,4	30,99	1,9	39,1	4305
500	26,45	3,4	34,45	2,0	43,0	5365

Unipolar Cables 15/25 kV						
Conductor		Insulation		Coverage		Nominal Weight (kg/km)
Section n	Diameter (mm)	Thickness (mm)	Diameter (mm)	Thickness (mm)	Diameter (mm)	
50	8,15	6,8	22,95	1,6	30,2	1170
70	9,55	6,8	24,35	1,7	31,8	1415
95	11,33	6,8	26,13	1,8	33,7	1725
120	12,85	6,8	27,65	1,8	35,4	2005
150	14,00	6,8	28,8	1,9	36,7	2325
185	15,78	6,8	30,58	1,9	38,7	2715
240	18,15	6,8	32,95	2,0	41,3	3320
300	20,15	6,8	34,95	2,1	43,6	3905
400	22,99	6,8	37,79	2,2	46,7	4855
500	26,45	6,8	41,25	2,3	50,6	5950

Unipolar Cables 8,7/15 kV						
Conductor		Insulation		Coverage		Nominal Weight (kg/km)
Section n	Diameter (mm)	Thickness (mm)	Diameter (mm)	Thickness (mm)	Diameter (mm)	
25	5,89	4,5	16,09	1,4	22,6	670
35	6,95	4,5	17,15	1,4	23,7	790
50	8,15	4,5	18,35	1,5	25,1	935
70	9,55	4,5	19,75	1,5	26,6	1170
95	11,33	4,5	21,53	1,6	28,6	1460
120	12,85	4,5	23,05	1,6	30,3	1725
150	14,00	4,5	24,2	1,7	31,6	2030
185	15,78	4,5	25,98	1,8	33,6	2405
240	18,15	4,5	28,35	1,8	36,2	2990
300	20,15	4,5	30,35	1,9	38,4	3550
400	22,99	4,5	33,19	2,0	41,6	4470
500	26,45	4,5	36,65	2,1	45,4	5545

Unipolar Cables 20/35 kV						
Conductor		Insulation		Coverage		Nominal Weight (kg/km)
Section n	Diameter (mm)	Thickness (mm)	Diameter (mm)	Thickness (mm)	Diameter (mm)	
50	8,15	8,8	26,95	1,8	34,7	1410
70	9,55	8,8	28,35	1,8	36,2	1670
95	11,33	8,8	30,13	1,9	38,2	1990
120	12,85	8,8	31,65	1,9	39,9	2285
150	14,00	8,8	32,8	2,0	41,2	2615
185	15,78	8,8	34,58	2,1	43,1	3020
240	18,15	8,8	36,95	2,1	45,8	3645
300	20,15	8,8	38,95	2,2	48,0	4250
400	22,99	8,8	41,79	2,3	51,2	5220
500	26,45	8,8	45,25	2,4	55,0	6340

Cable MTS Toxfree



Application

The Conduspar Line of Cables MTS Toxfree is suitable for energy distribution in medium voltage in locals of great people concentration, and with long escape and tumultuous routes. MTS Toxfree cables are halogen-free and have a low smoke emission in case of fire. In general, they are used in locals such as shopping centers, metropolitan transport stations and large buildings with a high flow of people.

Construction

Conductor: bare electrolytic copper wires, soft hardness, stringing of class 2 compact, acc. to NM 280.

Conductor shielding: semiconductive thermosetting compound.

Insulation: thermosetting compound of HEPR (ethylene propylene rubber), with coordinated, extruded and vulcanized thickness simultaneously with the semiconductive shieldings.

Insulation shielding: semiconductive thermosetting compound, with ease cold extraction.

Metallic shielding: bare copper wiring crown, effective section of 6,5 mm².

Coverage: halogen-free polyolefin thermoplastic compound with fire retardant (SHF1).

Voltage classes

3,6/6 kV, 6/10 kV, 8,7/15 kV, 12/20 kV, 15/25 kV and 20/35 kV

Maximum Operating Temperatures

In continuous regime: 90°C

In overload: 130°C

In short circuit: 250°C

Reference Standards

NBR 16132 - Power cables, halogen-free, with low smoke emission, insulated, with coverage, for voltages from 3 to 35 kV - Performance requirements.

ABNT NBR NM 280 - Conductors of insulated cables (IEC 60228, MOD).

Conditioning

In reels.

Cable MTS Toxfree

Nominal Dimensions

Unipolar Cables 3,6/6 kV						
Conductor		Insulation		Coverage		Nominal Weight (kg/km)
Section n	Diameter (mm)	Thickness (mm)	Diameter (mm)	Thickness (mm)	Diameter (mm)	
10	3,74	2,5	9,94	1,2	15,7	360
16	4,69	2,5	10,89	1,2	16,8	440
25	5,89	2,5	12,09	1,3	18,1	535
35	6,95	2,5	13,15	1,3	19,3	670
50	8,15	2,5	14,35	1,3	20,6	785
70	9,55	2,5	15,75	1,4	22,2	995
95	11,33	2,5	17,53	1,5	24,2	1.275
120	12,85	2,5	19,05	1,5	25,9	1.535
150	14,00	2,5	20,2	1,5	27,1	1.860
185	15,78	2,5	21,98	1,6	29,1	2.180
240	18,15	2,8	24,95	1,7	32,4	2.782
300	20,15	2,8	26,95	1,8	34,7	3.305
400	22,99	2,8	29,79	1,9	37,8	4.125
500	26,45	2,8	33,25	2,0	41,7	5.180

Unipolar Cables 12/20 kV						
Conductor		Insulation		Coverage		Nominal Weight (kg/km)
Section n	Diameter (mm)	Thickness (mm)	Diameter (mm)	Thickness (mm)	Diameter (mm)	
16	4,69	5,2	16,29	1,4	22,8	630
25	5,89	4,7	16,49	1,4	23,0	740
35	6,95	4,0	16,15	1,4	22,6	770
50	8,15	4,0	17,35	1,4	24,0	985
70	9,55	4,0	18,75	1,5	25,5	1.225
95	11,33	4,0	20,53	1,6	27,5	1.510
120	12,85	4,0	22,05	1,6	29,2	1.790
150	14,00	4,0	23,2	1,7	30,5	2.075
185	15,78	4,0	24,98	1,7	32,5	2.460
240	18,15	4,5	28,35	1,8	36,2	3.070
300	20,15	4,5	30,35	1,9	38,4	3.610
400	22,99	4,5	33,19	2,0	41,6	4.585
500	26,45	4,5	36,65	2,1	45,4	5.690

Unipolar Cables 6/10 kV						
Conductor		Insulation		Coverage		Nominal Weight (kg/km)
Section n	Diameter (mm)	Thickness (mm)	Diameter (mm)	Thickness (mm)	Diameter (mm)	
16	4,69	2,5	10,89	1,2	16,8	440
25	5,89	2,5	12,09	1,3	18,1	535
35	6,95	2,5	13,15	1,3	19,3	670
50	8,15	2,5	14,35	1,3	20,6	805
70	9,55	2,5	15,75	1,4	22,2	995
95	11,33	2,5	17,53	1,5	24,2	1.275
120	12,85	2,5	19,05	1,5	25,9	1.535
150	14,00	2,5	20,2	1,5	27,1	1.860
185	15,78	2,5	21,98	1,6	29,1	2.180
240	18,15	2,8	24,95	1,7	32,4	2.782
300	20,15	2,8	26,95	1,8	34,7	3.305
400	22,99	2,8	29,79	1,9	37,8	4.125
500	26,45	2,8	33,25	2,0	41,7	5.180

Unipolar Cables 15/25 kV						
Conductor		Insulation		Coverage		Nominal Weight (kg/km)
Section n	Diameter (mm)	Thickness (mm)	Diameter (mm)	Thickness (mm)	Diameter (mm)	
35	6,95	6,2	20,55	1,6	27,5	985
50	8,15	5,5	20,35	1,6	27,3	1.065
70	9,55	5,5	21,75	1,6	28,9	1.350
95	11,33	5,5	23,53	1,7	30,8	1.600
120	12,85	5,5	25,05	1,7	32,5	1.880
150	14,00	5,5	26,2	1,8	33,8	2.175
185	15,78	5,5	27,98	1,8	35,8	2.565
240	18,15	5,0	29,35	1,9	37,3	3.080
300	20,15	5,0	31,35	1,9	39,5	3.670
400	22,99	5,0	34,19	2,0	42,7	4.555
500	26,45	5,0	37,65	2,2	46,6	5.780

Unipolar Cables 8,7/15 kV						
Conductor		Insulation		Coverage		Nominal Weight (kg/km)
Section n	Diameter (mm)	Thickness (mm)	Diameter (mm)	Thickness (mm)	Diameter (mm)	
16	4,69	3,5	12,89	1,3	19,0	490
25	5,89	3,0	13,09	1,3	19,2	575
35	6,95	3,0	14,15	1,3	20,4	685
50	8,15	3,0	15,35	1,4	21,7	820
70	9,55	3,0	16,75	1,4	23,3	1.045
95	11,33	3,0	18,53	1,5	25,3	1.320
120	12,85	3,0	20,05	1,5	27,0	1.580
150	14,00	3,0	21,2	1,6	28,3	1.860
185	15,78	3,0	22,98	1,6	30,2	2.235
240	18,15	3,5	26,35	1,8	34,0	2.870
300	20,15	3,5	28,35	1,8	36,2	3.450
400	22,99	3,5	31,19	1,9	39,4	4.415
500	26,45	3,5	34,65	2,1	43,2	5.500

Unipolar Cables 20/35 kV						
Conductor		Insulation		Coverage		Nominal Weight (kg/km)
Section n	Diameter (mm)	Thickness (mm)	Diameter (mm)	Thickness (mm)	Diameter (mm)	
50	8,15	8,2	25,75	1,7	33,3	1.340
70	9,55	7,5	25,75	1,7	33,4	1.550
95	11,33	7,5	27,53	1,8	35,3	1.930
120	12,85	7,5	29,05	1,9	37,0	2.215
150	14,00	7,5	30,2	1,9	38,3	2.540
185	15,78	6,5	29,98	1,9	38,0	2.775
240	18,15	6,5	32,35	2,0	40,7	3.405
300	20,15	6,5	34,35	2,0	42,9	3.945
400	22,99	6,5	37,19	2,1	46,0	4.495
500	26,45	6,5	40,65	2,3	49,9	5.925

Copper



Application

Power distribution overhead lines with stringing of protection system against atmospheric discharges and grounding meshes.

Construction

Conductor: bare electrolytic copper wires, semi-hard hardness, stringing class 2A and 3A.

Voltage classes

3,6/6 kV, 6/10 kV, 8,7/15 kV, 12/20 kV, 15/25 kV and 20/35 kV

Reference Standards

NBR 6524 - Hard and half-hard copper wires with or without protected coverage for overhead line installations.

Nominal Dimensions

Section (mm ²)	Formation		Stringing Class 2A			
	Wire Quantity	Wire Diameter (mm)	External Diameter (mm)	Mechanical Strength (kN)	Rcc at 20°C (Ω/km)	Nominal Weight (kg/km)
10	7	1,36	4,08	3,29	1,82	90,5
16	7	1,70	5,10	5,06	1,17	141
25	7	2,06	6,18	7,39	0,795	208
35	7	2,50	7,50	10,73	0,538	306
50	7	3,00	9,00	15,23	0,375	440
70	7	3,45	10,35	20,02	0,283	582
95	7	4,12	12,36	28,39	0,199	831
120	19	2,90	14,50	38,97	0,148	1.120
150	19	3,25	16,25	48,52	0,118	1.405
185	19	3,55	17,75	57,55	0,099	1.675
240	19	4,00	20,00	72,63	0,0777	2.125
300	19	4,50	22,50	91,38	0,0613	2.690

Section (mm ²)	Formation		Stringing Class 3A			
	Wire Quantity	Wire Diameter (mm)	External Diameter (mm)	Mechanical Strength (kN)	Rcc at 20°C (Ω/km)	Nominal Weight (kg/km)
70	19	2,12	10,60	21,07	0,276	597
95	19	2,50	12,50	29,13	0,198	830
120	37	2,06	14,42	39,07	0,15	1.098
150	37	2,24	15,68	45,80	0,127	1.298
185	37	2,50	17,50	56,72	0,102	1.620
240	37	2,90	20,30	75,88	0,076	2.175
300	37	3,25	22,75	94,48	0,0604	2.710

Aluminum - CA



Application

Power distribution overhead lines and transmission lines.

Construction

Conductor: aluminum wires 1350 with stringing.

Reference Standards

ABNT NBR 7271 - Bare aluminum cables for overhead lines - Specification.

ASTM B231 - Standard Specification for Concentric-Lay-Stranded Aluminum 1350 Conductors.

Conditioning

In reels.

Nominal Dimensions

International Name	Section		Formation Wire Quantity x Diameter (mm)	Nominal Diameter (mm)	Bursting Load (kN)	Electric Resistance at 20°C (Ω/km)	Nominal Weight (kg/km)
	(AWG/MCM)	(mm ²)					
Peachbell	6	13,2 1	7 x 1,55	4,65	2,50	2,18260	36,4
Rose	4	21,12	7 x 1,96	5,88	3,91	1,36500	58,2
Lily	3	26,61	7 x 2,20	6,60	4,85	1,07990	73,4
Iris	2	33,54	7 x 2,47	7,41	5,99	0,85950	92,5
Pansy	1	42,49	7 x 2,78	8,34	7,30	0,67850	117,1
Poppy	1/0	53,52	7 x 3,12	9,36	8,84	0,53870	147,6
Aster	2/0	67,35	7 x 3,50	10,50	11,12	0,42810	185,7
Phlox	3/0	84,91	7 x 3,93	11,79	13,45	0,33950	234,1
Oxlip	4/0	107,41	7 x 4,42	13,26	17,01	0,26840	296,1
Valerian	250	126,37	19 x 2,91	14,55	20,68	0,22810	348,4
Sneezewort	250	126,67	7 x 4,80	14,40	20,06	0,22760	349,2
Laurel	266,8	135,20	19 x 3,01	15,05	22,13	0,21320	372,8
Daisy	266,8	135,25	7 x 4,96	14,88	21,42	0,21310	372,9
Peony	300	151,85	19 x 3,19	15,95	24,29	0,18980	418,7
Tulip	336,4	170,48	19 x 3,38	16,90	27,27	0,16910	470,0
Daffodil	350	177,62	19 x 3,45	17,25	28,41	0,16230	489,7
Canna	397,5	202,09	19 x 3,68	18,40	31,76	0,14270	557,2
Goldentuft	450	228,14	19 x 3,91	19,55	35,01	0,12640	629,0
Cosmos	477	241,15	19 x 4,02	20,10	37,01	0,11950	664,9
Syringa	477	241,03	37 x 2,88	20,16	38,60	0,11960	664,5
Zinnia	500	253,30	19 x 4,12	20,60	38,87	0,11380	698,4
Hyacinth	500	252,89	37 x 2,95	20,65	40,50	0,11360	697,2
Dahlia	556,5	281,08	19 x 4,34	21,70	43,33	0,10210	778,5
Mistietoe	556,5	281,07	37 x 3,11	21,77	43,99	0,10260	774,9
Meadowsweet	600	303,18	37 x 3,23	22,61	47,45	0,09510	835,9
Orchid	636	322,24	37 x 3,33	23,31	50,44	0,08950	888,4
Heuchera	650	330,03	37 x 3,37	23,59	47,81	0,08735	909,9
Verbena	700	353,95	37 x 3,49	24,43	51,28	0,81450	975,9

Aluminum - CA

Nominal Dimensions

International Name	Section		Formation Wire Quantity x Diameter (mm)	Nominal Diameter (mm)	Bursting Load (kN)	Electric Resistance at 20°C (Ω/km)	Nominal Weight (kg/km)
	(AWG/MCM)	(mm ²)					
Flag	700	354, 15	61 x 2,72	24,48	57,10	0,08130	977,2
Nasturtium	715,5	362,31	61 x 2,75	24,75	58,37	0,07960	998,9
Violet	715,5	362,11	37 x 3,53	24,71	56,68	0,07960	998,4
Cattail	750	380,99	61 x 2,82	25,38	60,35	0,07570	1.050,4
Petunia	750	380,81	37 x 3,62	25,34	58,56	0,07570	1.049,9
Lilac	795	402,92	61 x 2,90	26,10	63,82	0,07160	1.110,9
Artubus	795	402,14	37 x 3,72	26,04	61,85	0,07170	1.108,7
Anemone	876,8	444,27	37 x 3,91	27,37	66,71	0,06470	1.225,0
Snapdragon	900	457,44	61 x 3,09	27,81	70,81	0,06280	1.261,2
Cockscomb	900	455,70	37 x 3,96	27,72	68,42	0,06330	1.256,4
Goldenrod	954	484,48	61 x 3,18	28,62	75,00	0,05950	1.335,7
Magnolia	954	483,74	37 x 4,08	28,56	72,63	0,05960	1.333,7
Camellia	1000	506,04	61 x 3,25	29,25	78,34	0,05700	1.395,2
Hawkweed	1000	507,74	37 x 4,18	29,26	76,24	0,05680	1399,9
Larkspur	1033,5	524,90	61 x 3,31	29,79	81,25	0,05490	1.447,2
Bluebell	1033,5	522,42	37 x 4,24	29,68	78,44	0,05520	1.440,4
Marigold	1113	563,65	61 x 3,43	30,87	87,25	0,05110	1.554,0
Hawthorn	1192,5	603,78	61 x 3,55	31,95	93,46	0,04770	1.664,6
Narcissus	1272	645,29	61 x 3,67	33,03	98,15	0,04470	1.779,1
Columbine	1351	684,55	61 x 3,78	34,02	104,12	0,04210	1.887,3
Carnation	1431	724,97	61 x 3,89	35,01	110,01	0,03977	1.998,8
Gladiolus	1510,5	766,55	61 x 4,00	36,00	113,83	0,03760	2.113,4
Coreopsis	1590	805,36	61 x 4,10	36,90	119,60	0,03570	2.220,4

Aluminum with Steel Core - CAA



Application

Power distribution overhead lines and transmission lines.

Construction

Conductor

Aluminum wires 1350 and galvanized steel wires

Zinc-plated steel wires

Reference Standards

ABNT NBR 7270 - Bare aluminum cables with zinc-plated steel core for overhead lines - Specification.

ASTM B232 - Concentric-Lay-Stranded Aluminum Conductors, Coated-Steel Reinforced (ACSR).

Conditioning

In reels.

Nominal Dimensions

Name	Section (AWG/MCM)	Aluminum Wires Wire Quantity x Diameter (mm)	Steel Wires Wire Quantity x Diameter (mm)	Nominal Diameter (mm)	Bursting Load (kN)	Electric Resistance at 20°C (Ω/km)	Nominal Mass		Nominal Weight (kg/km)
							Aluminum (kg/km)	Steel (kg/km)	
Turkey	6	6 x 1,68	1 x 1,68	5,0	5,30	2,15690	36,5	17,2	53,7
Swan	4	6 x 2,12	1 x 2,12	6,4	8,30	1,35450	58,1	27,5	85,6
Sparrow	2	6 x 2,67	1 x 2,67	8,0	12,65	0,85400	92,2	43,6	135,7
Raven	1/0	6 x 3,37	1 x 3,37	10,1	19,45	0,53600	146,9	69,4	216,2
Quail	2/0	6 x 3,78	1 x 3,78	11,3	23,53	0,42610	184,8	87,3	272,0
Pigeon	3/0	6 x 4,25	1 x 4,25	12,8	29,42	0,33700	233,6	110,4	343,9
Penguin	4/0	6 x 4,77	1 x 4,77	14,3	37,06	0,26760	294,2	139,0	433,2
Petrel	101,8	12 x 2,34	7 x 2,34	11,7	46,20	0,56130	143,0	235,0	378,0
Minorca	110,8	12 x 2,44	7 x 2,44	12,2	50,24	0,51630	155,0	256,0	411,0
Dotterel	176,9	12 x 3,08	7 x 3,08	15,4	76,84	0,32400	248,0	407,0	655,0
Waxwing	266,8	18 x 3,09	1 x 3,09	15,5	31,22	0,21360	372,0	58,3	430,5
Partridge	266,8	26 x 2,57	7 x 2,00	16,3	50,11	0,21480	374,0	172,0	545,5
Ostrich	300	26 x 2,73	7 x 2,12	17,3	56,41	0,19040	422,0	193,0	614,7
Merlin	336,4	18 x 3,47	1 x 3,47	17,4	39,36	0,16940	469,0	73,6	542,9
Linnet	336,4	26 x 2,89	7 x 2,25	18,3	62,92	0,16990	473,0	217,0	689,9
Oriole	336,4	30 x 2,69	7 x 2,69	18,8	77,27	0,17030	474,0	311,0	784,3
Chickadee	397,5	18 x 3,77	1 x 3,77	18,9	45,14	0,14350	554,0	86,8	640,8
Brant	397,5	24 x 3,27	7 x 2,18	19,6	65,10	0,14370	558,0	204,0	762,5
Ibis	397,5	26 x 3,14	7 x 2,44	19,9	72,43	0,14390	558,0	256,0	813,5
Lark	397,5	30 x 2,92	7 x 2,92	20,4	90,48	0,14460	558,0	366,0	924,1
Pelican	477	18 x 4,14	1 x 4,14	20,7	53,50	0,11900	668,0	105,0	772,8
Hawk	477	26 x 3,44	7 x 2,68	21,8	87,18	0,11990	670,0	308,0	977,9
Hen	477	30 x 3,20	7 x 3,20	22,4	105,61	0,12040	670,0	440,0	1109,8
Osprey	556,5	18 x 4,47	1 x 4,47	22,3	62,37	0,10210	779,0	122,0	900,9
Parakeet	557,1	24 x 3,87	7 x 2,58	23,2	88,29	0,10260	782,0	286,0	1068,1

Aluminum with Steel Core - CAA

Nominal Dimensions

Name	Section (AWG/MCM)	Aluminum Wres Wire Quantity x Diameter (mm)	Steel Wres Wire Quantity x Diameter (mm)	Nominal Diameter (mm)	Bursting Load (kN)	Electric Resistance at 20°C (Ω/km)	Nominal Mass		Nominal Weight (kg/km)
							Aluminum (kg/km)	Steel (kg/km)	
Dove	556,5	26 x 3,72	7 x 2,89	23,6	100,84	0,10250	783,0	359,0	1141,6
Eagle	556,5	30 x 3,46	7 x 3,46	24,2	123,47	0,10300	783,0	514,0	1297,5
Peacock	605,7	24 x 4,03	7 x 2,69	24,2	93,10	0,09460	848,0	311,0	1159,0
Squab	605	26 x 3,87	7 x 3,01	24,5	108,14	0,09470	847,0	389,0	1236,4
Duck	605	30 x 3,61	7 x 3,61	25,3	128,74	0,09460	853,0	560,0	1412,5
Kingbird	636	18 x 4,78	1 x 4,78	23,9	71,32	0,08930	891,0	140,0	1030,2
Rook	636	24 x 4,14	7 x 2,76	24,8	101,04	0,08970	895,0	327,0	1222,2
Grosbeak	636	26 x 3,97	7 x 3,09	25,2	111,87	0,09000	892,0	410,0	1301,7
Scoter	636	30 x 3,70	7 x 3,70	25,9	135,23	0,09000	896,0	588,0	1483,8
Flamingo	666,6	24 x 4,23	7 x 2,82	25,4	105,48	0,08590	934,0	342,0	1275,9
Gannet	666,6	26 x 4,07	7 x 3,16	25,8	117,26	0,08560	937,0	429,0	1366,0
Stilt	715,5	24 x 4,39	7 x 2,92	26,3	113,35	0,07970	1006,0	266,0	1372,6
Starling	715,5	26 x 4,21	7 x 3,28	26,7	125,95	0,08000	1003,0	462,0	1464,8
Cuckoo	795	24 x 4,62	7 x 3,08	27,7	123,82	0,07200	1115,0	407,0	1522,1
Drake	795	26 x 4,44	7 x 3,45	28,1	139,67	0,07200	1115,0	511,0	1626,5
Tern	795	45 x 3,38	7 x 2,25	27,0	98,20	0,07190	1119,0	217,4	1338,8
Condor	795	54 x 3,08	7 x 3,08	27,7	125,06	0,07240	1115,0	407,4	1527,5
Mallard	795	30 x 4,14	19 x 2,48	29,0	171,22	0,07190	1122,0	718,3	1839,9
Ruddy	900	45 x 3,59	7 x 2,40	28,7	108,96	0,06380	1262,0	247,4	1512,4
Canary	900,5	54 x 3,28	7 x 3,28	29,5	141,80	0,06350	1264,0	462,0	1726,2
Rail	954	45 x 3,70	7 x 2,47	29,6	115,63	0,06000	1341,0	262,0	1605,8
Cardinal	954	54 x 3,38	7 x 3,38	30,4	150,61	0,06010	1342,0	490,6	1839,6
Ortolan	1033,5	45 x 3,85	7 x 2,57	30,8	123,28	0,05540	1451,0	283,6	1738,6
Curlew	1033,5	54 x 3,51	7 x 3,51	31,6	162,41	0,05570	1448,0	529,1	1983,8
Bluejay	1113	45 x 4,00	7 x 2,66	32,0	132,71	0,05140	15667,0	303,9	1874,4
Finch	1113	54 x 3,65	19 x 2,19	32,8	174,09	0,05150	1573,1	560,2	2133,2
Bunting	1192,5	45 x 4,14	7 x 2,76	33,1	142,42	0,04790	1678,3	327,1	2005,4
Grackle	1192,5	54 x 3,77	19 x 2,27	34,0	186,38	0,04830	1678,2	601,8	2280,1
Bittern	1272	45 x 4,27	7 x 2,85	34,2	151,63	0,04510	1678,2	601,8	2138,5
Pheasant	1272	54 x 3,90	19 x 2,34	35,1	194,13	0,04510	1796,0	639,5	2435,5
Martin	1351,5	54 x 4,02	19 x 2,41	36,2	206,08	0,04250	1908,2	678,3	2586,5
Bobolink	1431	45 x 4,53	7 x 3,02	36,2	170,51	0,04000	2009,4	391,6	2406,0
Plover	1431	54 x 4,14	19 x 2,48	37,2	218,40	0,04000	2023,8	718,3	2742,1
Nuthatch	1510,5	45 x 4,65	7 x 3,10	37,2	177,64	0,03800	2117,3	412,7	2535,1
Parrot	1510,5	54 x 4,25	19 x 2,55	38,2	230,53	0,03800	2132,8	759,4	2892,2
Lapwing	1590	45 x 4,78	7 x 3,18	38,2	187,43	0,03600	2237,3	434,3	2677,0
Falcon	1590	54 x 4,36	19 x 2,62	39,3	242,99	0,03610	2244,6	801,7	3046,3

Multiplex Cable 1 kV



Application

The Conduspar Line of Multiplex Cables 1 kV is suitable for secondary circuits of power distribution and consumer connection in low voltage.

Construction

Phase conductor: Aluminum wires 1350, stringing class 2, compact, acc. to NM 280.

Insulation: thermosetting compound of XLPE (reticular polyethylene), weather resistant.

Identificación:

1 phase: black

2 phases: black and gray

3 phases: black, grey and red

Neutral conductor:

Aluminum CA: aluminum wires 1350, hardness H19, normal round stringing.

Alloy aluminum CAL: aluminum wires with alloy 6201, hardness T81, normal round stringing, acc. to 10298.

Neutral conductor insulation: if requested, in XLPE in light blue.

Maximum Operating Temperatures

In continuous regime: 90°C

In overload: 130°C

In short circuit: 250°C

Reference Standards

ABNT NBR 8182 - Self-sustained multiplex power cables with extruded insulation of PE or XLPE, for voltages up to 0,6/1 kV - Performance requirements.

ABNT NBR NM 280 - Conductors of insulated cables (IEC 60228, MOD).

ABNT NBR 10298 - Bare cables with alloy aluminum-magnesium-silicon, for overhead lines - Specification.

Conditioning

In rolls of 100 m or reels, for section up to 25 mm². For other constructions, in reels.

Multiplex Cable 1 kV

Nominal Dimensions

Formation	Conductor Phase Diameter (mm)	Cables with Neutral in Aluminum- CA		Neutral Conductor - CA Wire Quantity x Diameter (mm)	Bursting Load (daN)	Wiring Diameter (mm)	Nominal Weight (kg/km)	
		Insulation Thickness (mm)	Diameter (mm)					
1x1x10+10	3,7	1,2	6,1	7 x 1,36	4,2	195	10,6	71
1x1x16+16	4,7	1,2	7,1	7 x 1,70	5,2	300	12,7	106
1x1x25+25	5,9	1,4	8,7	7 x 2,06	6,3	446	15,5	160
2x1x10+10	3,7	1,2	6,1	7 x 1,36	4,2	195	12,2	168
2x1x16+16	4,7	1,2	7,1	7 x 1,70	5,2	300	14,4	255
2x1x25+25	5,9	1,4	8,7	7 x 2,06	6,3	446	17,6	356
3x1x10+10	3,7	1,2	6,1	7 x 1,36	4,2	195	14,0	157
3x1x16+16	4,7	1,2	7,1	7 x 1,70	5,2	300	16,4	230
3x1x25+25	5,9	1,4	8,7	7 x 2,06	6,3	446	20,1	350
3x1x35+35	7,0	1,6	10,2	7 x 2,50	7,7	614	23,7	487
3x1x50+50	8,1	1,6	11,3	7 x 3,00	9,2	836	26,7	640
3x1x70+70	9,5	1,8	13,1	7 x 3,45	10,6	1081	31,0	892
3x1x95+95	11,2	2,0	15,2	19 x 2,50	12,8	1613	36,2	1.225
3x1x120+120	12,6	2,0	16,6	19 x 2,90	14,8	2054	40,1	1.531
3x1x35+35	7,0	1,6	10,2	7 x 2,50	7,65	1092	23,7	490
3x1x35+50	7,0	1,6	10,2	7 x 3,00	9,18	1572	24,6	530
3x1x50+35	8,1	1,6	11,3	7 x 2,50	7,65	1092	25,8	625
3x1x50+50	8,1	1,6	11,3	7 x 3,00	9,18	1572	26,7	665
3x1x70+50	9,5	1,8	13,1	7 x 3,00	9,18	1572	30,1	895
3x1x70+70	9,5	1,8	13,1	7 x 3,45	10,56	1991	31,0	920
3x1x95+70	11,2	2,0	15,2	7 x 3,45	10,56	1991	34,9	1.120
3x1x120+70	12,6	2,0	16,6	7 x 3,45	10,56	1991	37,5	1.375

Protected Cable



Application

The Conduspar Line of Protected Cables is suitable for compact primary networks of medium voltage power distribution. The protected cable coverage is resistant to electrical tracking and weather. This increases the reliability of the overhead line distribution, which prevents discharges and shutdowns, in occasional contacts with grounded objects and trees.

Construction

Conductor: aluminum wire 1350, stringing class 2 compact, with longitudinal humidity locking, acc. to NM 280.

Conductor shielding: semiconductive thermosetting compound (including para cables de 35 kV, optional for cables of 15 and 25 kV).

Coverage: thermosetting compound of XLPE (reticular polyethylene), resistant to electrical tracking and weather, in gray.

Maximum Operating Temperatures

In continuous regime: 90°C

In overload: 100°C

In short circuit: 250°C

Reference Standards

ABNT NBR 11873 - Cables covered with polymeric material for power distribution networks fixed in spacers, in voltajes from 13,8 to 34,5 kV.

ABNT NBR NM 280 - Conductors of insulated cables (IEC 60228, MOD).

Conditioning

In reels.

Protected Cable 1 kV

Nominal Dimensions

Protected Cables 15 kV				
Section (mm ²)	Conductor Diameter (mm)	Coverage Thickness (mm)	External Diameter (mm)	Nominal Weight (kg/km)
35	6,95	3,0	13,3	184
50	8,15	3,0	14,6	226
70	9,65	3,0	16,1	297
95	11,45	3,0	18,0	384
120	12,95	3,0	19,5	462
150	14,40	3,0	21,0	546
185	16,15	3,0	22,8	672
240	18,29	3,0	25,0	843
300	20,65	3,0	27,4	1.021

Protected Cables 25 kV				
Section (mm ²)	Conductor Diameter (mm)	Coverage Thickness (mm)	External Diameter (mm)	Nominal Weight (kg/km)
35	6,95	4,0	15,4	225
50	8,15	4,0	16,6	271
70	9,65	4,0	18,2	346
95	11,45	4,0	20,0	437
120	12,95	4,0	21,6	520
150	14,40	4,0	23,1	608
185	16,15	4,0	24,9	739
240	18,29	4,0	27,1	916
300	20,65	4,0	29,5	1.101

Protected Cables 35 kV				
Section (mm ²)	Conductor Diameter (mm)	Coverage Thickness (mm)	External Diameter (mm)	Nominal Weight (kg/km)
70	9,65	7,6	26,8	879
95	11,45	7,6	28,7	953
120	12,95	7,6	30,2	1.028
150	14,40	7,6	31,7	1.129
185	16,15	7,6	33,5	1.230
240	18,29	7,6	35,7	1.333
300	20,65	7,6	38,2	1.437

Cable MTX-RA 15 kV



Application

The Conduspar Line of Cables MTX-RA 15 kV is the most robust solution for an overhead distribution line with medium voltage. Self-sustaining multiplex insulated cables eliminate the risk of discharging and switching off due to contacts with the medium voltage overhead line. They are indicated for crossings of routes with high traffic, networks near to buildings, or simply in the use of the same high tension network with several nearby circuits.

Construction

Phase conductor: aluminum wires 1350, stringing class 2, compact, with longitudinal humidity locking, acc. to NM 280.

Conductor shielding: semiconductive thermosetting compound.

Insulation: thermosetting compound of XLPE (reticular polyethylene), with coordinated, extruded and vulcanized thickness simultaneously with the semiconductive layers.

Insulation shielding: semiconductive thermosetting compound with ease cold extraction.

Metallic shielding: bare copper wiring crown, effective section of 6,5 mm².

Coverage: thermoplastic compound of PE/ST7, resistant to weather, in black.

Neutral for support: aluminum cable with alloy 6201, acc. to 10298.

Maximum Operating Temperatures

In continuous regime: 90°C

In overload: 130°C

In short circuit: 250°C

Reference Standards

ABNT NBR 9024 - Self-sustaining multiplex insulated cables with extruded insulation of XLPE for voltages from 10 to 35 kV with coverage - Performance requirements.

ABNT NBR NM 280 - Conductors of insulated cables (IEC 60228, MOD).

ABNT NBR 10298 - Bare cables with alloy aluminum-magnesium-silicon, for overhead lines - Specification.

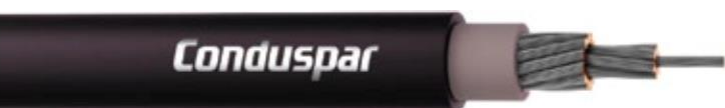
Conditioning

In reels.

Nominal Dimensions

Formation	Conductor Diameter	Cables with Neutral in Aluminum - CA							
		Insulation		Coverage		Neutral Diameter (mm)	Conductor Bursting Load (daN)	Wiring Diameter (mm)	Nominal Weight (kg/km)
Thickness (mm)	Diameter (mm)	Thickness (mm)	Diameter (mm)						
3x1x35+35	6,95	3,0	14,2	1,4	20,7	7,7	1090	42,1	1.325
3x1x35+50	6,95	3,0	14,2	1,4	20,7	9,2	1570	43,0	1.381
3x1x50+50	8,15	3,0	15,4	1,4	22,1	9,2	1570	45,5	1.466
3x1x70+70	9,65	3,0	16,9	1,5	23,8	10,6	1990	49,3	1.765
3x1x95+70	11,45	3,0	18,7	1,6	25,8	10,6	1990	52,9	2.075
3x1x120+70	12,95	3,0	20,2	1,6	27,4	10,6	1990	56,0	2.380
3x1x150+120	14,40	3,0	21,6	1,7	29,0	14,2	3600	61,0	2.860
3x1x185+120	16,15	3,0	23,4	1,7	31,0	14,2	3600	64,6	3.260
3x1x240+120	18,29	3,5	26,5	1,8	34,5	14,2	3600	70,9	3.800

Cable PROSOLAR FV



Application

The Conduspar Line of Cables PROSOLAR FV is suitable for connections of photovoltaic panels. The reliability in photovoltaic systems demands resistance to high levels of UV radiation, workability in extreme temperature ranges and halogen-free materials to prevent the emission of corrosive smoke in case of fire. In addition to all these requirements, the cables PROSOLAR FV have excellent flexibility to facilitate handling during installation. These characteristics make the cables PROSOLAR FV able to operate for at least 25 years.

Construction

Conductor: tinned electrolytic copper wires, flexible stringing class 5, acc. to NM 280.

Insulation: halogen-free polyolefin thermoplastic compound

Insulation: halogen-free polyolefin thermoplastic compound with fire retardant, resistant to UV radiation and weather.

Colors: black, blue and red - other colors on request.

Operation Conditions

Insulation voltage in direct current: 1,8 kV (among conductors - systems without grounding)

Insulation voltage in alternating current: 0,6/1 kV

Room temperature: - 40°C to + 90°C

Maximum Operating Temperatures

In continuous regime: 90°C or 120°C for up to 20.000 hours

In short circuit: 250°C

Reference Standards

TÜV 2 PFG 1169 - Requirements for cables for use in photovoltaic-systems.

ABNT NBR NM 280 - Conductors of insulated cables (IEC 60228, MOD).

Conditioning

In rolls of 100 m or reels.

Nominal Dimensions

Code	Conductor		Cable		Coverage		Nominal	Minimum ray of
	Section (mm ²)	Diameter (mm)	Diameter (mm)	Thickness (mm)	Diameter (mm)	Weight (kg/km)	Curvature (mm)	
17585	4	2,47	0,7	0,9	5,8	59,3	29	
17586	6	3,02	0,7	1	6,5	78,6	33	
17587	10	3,99	0,7	1	7,5	122	38	

Electric Parameters

Section (mm ²)	Resistance in CC (/km)			Current Capacity		
	20°C	90°C	120°C	Outdoor	In Ducts	Buried Ducts
4	5,09	6,49	7,09	48	42	44
6	3,39	4,32	4,72	63	54	56
10	1,95	2,49	2,72	88	75	73

Correction Factors of Current Capacity

Temperature (°C)	10	15	20	25	30	35	40	45	50	55	60
Air	1,15	1,12	1,08	1,04	1	0,96	0,91	0,87	0,82	0,76	0,71
Floor	1,07	1,04	1	0,96	0,93	0,89	0,85	0,8	0,76	0,71	0,65



MTX GRID



MT S105 GRID

When considering the reliability requirement of the underground power distribution networks and the renewable generation plants, Conduspar developed the GRID line.

The underground distribution circuits are mainly subject to permanent contact with humidity, or even total submersion. The humidity can be extremely harmful to insulating materials in medium voltage, with reduced life expectancy and circuits subject to unexpected faults.

To increase the reliability of these medium voltage circuits, the Conduspar GRID line has protection structures against the penetration of humidity inside the cables, and a cover in highly resistant material to abrasion and humidity absorption.

The MTX GRID and MTS105 GRID lines feature unique construction features, which protect cables from permanent contact with humidity in directly buried installations.

The constructive advantages of Conduspar MT GRID cables are:

- Aluminum conductors blocked against longitudinal penetration of humidity.
- Metallic shielding with specific sections for short circuit characteristics of the system and blocking of longitudinal penetration of humidity.
- Coverage in high density polyethylene (PE/ST7) resistant to abrasion and contact with humidity.
- MT GRID cable lines are available for voltage classes from 8,7/15 to 20/35 kV.

The main difference of application between the MTX GRID and MTS105 GRID lines is the current carrying capacity. The MTX line is insulated in XLPE, for temperatures in the conductor up to 90°C and the line MTS105 is isolated in EPR, for temperatures up to 105°C in the conductor. The insulation in EPR105 allows about 10% more current capacity.



Cable MTX GRID 35 kV



The version of the GRID line isolated in XLPE for voltages up to 35 kV. The XLPE is the material traditionally used as an insulation for medium voltage cables in large distribution lines and power generation networks.

Construction

Phase conductor: aluminum wires 1350, stringing class 2, compact, with longitudinal humidity locking, acc. to NM 280.

Conductor shielding: semiconductive thermosetting compound.

Insulation: thermosetting compound of XLPE (reticular polyethylene), with coordinated, extruded and vulcanized thickness simultaneously with the semiconductive layers.

Insulation shielding: semiconductive thermosetting compound with ease cold extraction.

Metallic shielding: bare copper wiring crown, effective section of 6,5 mm², with longitudinal humidity locking (other sections on request).

Coverage: thermoplastic compound of PE/ST7, indicated for permanent contact with humidity and directly buried installations, in black.

Maximum Operating Temperatures

In continuous regime: 90°C

In overload: 130°C

In short circuit: 250°C

Reference Standards

NBR 7287 - Power cables with solid extruded insulation of reticular polyethylene (XLPE) for insulation voltages from 1 to 35 kV - Performance requirements.

ABNT NBR NM 280 - Conductors of insulated cables (IEC 60228, MOD).

Conditioning

In reels.

Nominal Dimensions

Unipolar Cables 20/35 kV						
Section	Conductor		Insulation		Coverage	Nominal
	Diameter	Thickness	Diameter	Thickness	Diameter	Weight
(mm ²)	(mm)	(mm)	(mm)	(mm)	(mm)	(kg/km)
50	8,15	8,8	27,5	1,9	35,0	1.025
70	9,65	8,8	29,0	1,9	36,7	1.145
95	11,45	8,8	30,9	2,0	38,7	1.285
120	12,95	8,8	32,4	2,0	40,4	1.455
150	14,40	8,8	33,9	2,1	42,1	1.540
185	16,15	8,8	35,6	2,1	44,0	1.760
240	18,29	8,8	37,8	2,2	46,4	1.945
300	20,65	8,8	40,2	2,3	49,1	2.200
400	23,65	8,8	43,3	2,4	52,5	2.635
500	26,32	8,8	46,0	2,5	55,5	1.955
630	29,90	8,8	49,7	2,6	59,5	3.485

Cable MTS105 GRID 35 kV



The version of the GRID line isolated in EPR105 for voltages up to 35 kV. The EPR105 maximizes the current capacity of power distribution and generation circuits.

Construction

Phase conductor: aluminum wires 1350, stringing class 2, compact, with longitudinal humidity locking, acc. to NM 280.

Conductor shielding: semiconductive thermosetting compound.

Insulation: thermosetting compound of XLPE (reticular polyethylene), with coordinated, extruded and vulcanized thickness simultaneously with the semiconductive layers.

Insulation shielding: semiconductive thermosetting compound with ease cold extraction.

Metallic shielding: bare copper wiring crown, effective section of 6,5 mm², with longitudinal humidity locking (other sections on request).

Coverage: thermoplastic compound of PE/ST7, indicated for permanent contact with humidity and directly buried installations, in black.

Maximum Operating Temperatures

In continuous regime: 105°C

In overload: 140°C

In short circuit: 250°C

Reference Standards

ABNT NBR 7286 - Power cables with extruded insulation de ethylene propylene rubber (EPR) for voltages from 1 to 35 kV - Performance requirements.

ABNT NBR NM 280 - Conductors of insulated cables (IEC 60228, MOD).

Conditioning

In reels.

Nominal Dimensions

Unipolar Cables 20/35 kV						
Section	Conductor		Insulation		Coverage	Nominal
	Diameter	Thickness	Diameter	Thickness	Diameter	Weight
50	8,15	8,2	26,3	1,7	33,7	1.085
70	9,65	7,5	26,4	1,7	33,8	1.190
95	11,45	7,5	28,2	1,8	35,8	1.340
120	12,95	7,5	29,7	1,8	37,5	1.465
150	14,40	7,5	31,2	1,9	39,1	1.605
185	16,15	6,5	31,0	1,9	38,9	1.755
240	18,29	6,5	33,1	2,0	41,3	1.995
300	20,65	6,5	35,5	2,0	43,9	2.255
400	23,65	6,5	38,6	2,2	47,3	2.620
500	26,32	6,5	41,3	2,2	50,3	2.765
630	29,90	6,5	45,0	2,4	54,3	3.200

Aluminum Cable with Core in Composite ACCC



Application

For many years, steel cables reinforced with steel stinging have been used to increase mechanical strength, and reduce the arrow due to the thermal effect on power transmission lines.

Once the demand for electrical energy is increasing, there is a need to build new transmission lines. However, the approval of new transmission line projects runs into environmental and privately owned difficulties. In this context, increasing the capacity of existing lines becomes increasingly important.

New conductor types were introduced to the market, with focus on increasing capacity, to work in higher temperatures. Some aluminum alloys, already widely used, confer greater mechanical resistance and reduce the arrows. But, both higher temperatures and aluminum alloys are associated with increased energy losses.

Conduspar, in partnership with CTC Global, brought to Brazil the aluminum cable line with ACCC® carbon core. The proposal for ACCC® cables to the market is to increase the capacity of the lines, even by providing a substantial reduction in the arrows compared to other types of conductors.

When compared to aluminum cables with a CAA steel core of the same diameter, an ACCC® cable can contain more aluminum mass up to 28%, even with a reduction in total weight. The aluminum used in the construction of ACCC® cables is type 1350-O annealed. The superior conductivity of this type of aluminum (63% IACS) allows to operate with more efficiency than any other cable type available in the market.

The core of ACCC® cables consists of a composite of carbon fiber, glass fiber and epoxy resin for high temperature. A high-grade glass fiber layer involves the core to add flexibility, strength and even prevent galvanic corrosion between carbon fiber and aluminum filaments. The carbon core has higher tensile strength and lower coefficient of thermal expansion on the market.

Construction

Conductor: trapezoidal aluminum wires, type 1350 annealed, hardness O.

Core: composite of carbon fiber and glass fiber, involved by epoxy resin resistant to heat.

Maximum Operating Temperatures

In continuous regime: 180°C

In emergency/overload: 200°C

Reference Standards

The requirements of the ACCC® cables are partially based on the standards:

ASTM B857 - Standard Specification for Shaped Wire Compact Concentric-Lay-Stranded Aluminum Conductors, Coated-Steel Supported (ACSS/TW).

ASTM B609 - Standard Specification for Aluminum 1350 Round Wire, Annealed and Intermediate Tempers, for Electrical Purposes.

EN 50540 - Conductors of Overhead Lines - Aluminum Conductors Steel Supported (ACSS).

Conditioning

In reels.

Aluminum Cable with Core in Composite ACCC

Nominal Dimensions

Name	Conductor		Cable Diameter (mm)	Core Diameter (mm)	Bursting Load (kN)	Electric Resistance at 20°C (Ω/km)	Ampacity		Nominal Weight (kg/km)
	MCM	(mm ²)					100°C	180°C	
Pasadena	305	154,4	15,65	5,97	60,4	0,1792	528	778	478
Linnet	430	218,1	18,29	5,97	60,4	0,1277	654	968	655
Oriole	439	222,3	18,82	7,11	85,7	0,1255	665	986	689
Waco	454	230,1	19,56	7,75	101,7	0,1212	683	1.012	721
Laredo	530	268,4	20,50	7,11	85,7	0,1038	747	1.109	816
Irving	609	308,8	22,40	8,76	130,2	0,0904	820	1.222	965
Hawk	611	309,7	21,79	7,11	85,7	0,0900	823	1.231	930
Dove	714	361,5	23,55	7,75	101,7	0,0771	902	1.346	1.083
Grosbeak	821	416,2	25,15	8,13	112,0	0,0672	981	1.468	1.245
Lubbock	904	458,0	26,42	8,76	130,2	0,0608	1.045	1.566	1.376
Galveston	1011	512,4	27,69	8,76	130,2	0,0544	1.119	1.681	1.526
Drake	1026	519,7	28,14	9,53	153,8	0,0536	1.134	1.706	1.565
Curlew	1033	523,4	28,96	10,54	188,3	0,0535	1.142	1.722	1.610
Plano	1059	536,8	28,63	8,76	130,2	0,0522	1.150	1.733	1.597
Corpus Christi	1103	558,9	29,11	8,76	130,2	0,0501	1.179	1.777	1.657
Arlington	1151	583,2	29,90	9,53	153,8	0,0480	1.213	1.830	1.745
Cardinal	1222	619,1	30,43	8,76	130,2	0,0452	1.258	1.902	1.823
Fort Worth	1300	658,9	31,50	9,53	153,8	0,0425	1.305	1.975	1.952
El Paso	1350	684,0	31,80	8,76	130,2	0,0409	1.332	2.018	2.002
ULS El Paso	1350	684,0	31,80	8,76	155,1	0,0409	1.332	2.018	2.002
Beaumont	1429	723,9	32,87	9,53	153,8	0,0387	1.381	2.096	2.136
San Antonio	1475	747,3	33,40	9,78	162,1	0,0375	1.432	2.176	2.212
Bittern	1582	801,4	34,16	8,76	130,2	0,0352	1.465	2.229	2.331
ULS Bittern	1582	801,4	34,16	8,76	155,1	0,0352	1.465	2.229	2.331
Dallas	1795	909,5	36,88	9,78	162,1	0,0309	1.585	2.430	2.671
ULS Dallas	1795	909,5	36,88	9,78	193,5	0,0309	1.585	2.430	2.671
Houston	1927	976,6	38,25	10,54	188,3	0,0285	1.660	2.554	2.878
Lapwing	1949	987,5	38,20	9,78	162,1	0,0285	1.660	2.547	2.887
Falcon	2045	1036,2	39,24	10,54	188,3	0,0271	1.719	2.639	3.044
Chukar	2242	1135,8	40,74	10,03	170,6	0,0247	1.808	2.785	3.303
Bluebird	2741	1388,7	44,75	10,54	188,3	0,0203	2.010	3.130	4.022

CONDUCTORS EQUIVALENCE

Section (AWG/MCM)	Equivalent Area (mm ²)	Approximated Nominal Section* (mm ²)
22	0,326	0,5
21	0,411	0,5
20	0,518	0,5
19	0,653	0,75
18	0,823	1
17	1,04	1
16	1,31	1,5
15	1,65	1,5
14	2,08	2,5
13	2,62	2,5
12	3,31	4
11	4,17	4
10	5,26	6
9	6,63	6
8	8,37	10
7	10,55	10
6	13,30	16
5	16,77	16
4	21,15	25
3	26,67	25
2	33,63	35
1	42,41	50
(1/0)	53,48	50
(2/0)	67,43	70
(3/0)	85,03	95
(4/0)	107,2	120
250	126,7	120
300	152,0	150
350	177,3	185
400	202,7	240
450	228,0	240
500	253,4	240
600	304,0	300
700	354,7	400
750	380,0	400
800	405,4	400
900	456,0	500
1000	506,7	500
1250	633,4	630
1500	760,1	800
1750	886,7	1000
2000	1.013,4	1000

* The approximate nominal section takes into account a tolerance of 10% in the conductor size. Conduspar is not responsible for sizing.



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Rua Dr. Murici, 4000 • São José dos Pinhais • Paraná • Brasil • CEP 83015-290 • Fone (41) 2109-6000 • vendas@conduspar.com.br

www.conduspar.com.br

