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INNOVCABLE CABLE INNOVNAX HEPR 3.6/6KV A 20/35KV 90°C – NBR 7286



- 1-) Conductor: Bare electrolytic copper wires, soft temper, class 2 or 5 stringing, according to NBR NM 280; 2-) Conductor Shielding: Semiconductor Thermoset Compound (optional for class 3.6/6kv)
- 3-) Insulation: HEPR 90°C thermoset compound based on cross-linked polyethylene meeting the NBR 6251 standard.
- 4-) Insulation Shielding: Semiconductor Thermoset Compound (optional for class 3.6/6kv).
- 5-) Metallic Shielding: Bare copper wires with a section of 6mm²*, soft temper, with helical application, (other shielding sections upon request).
- *In three-pole cables, the section indicated is the shielding of each vein.
- 6) Separator tape made of suitable non-hygroscopic material.
- 7-) Cover: Thermoplastic compound based on polyvinyl chloride (PVC/ST2).

Mechanical characteristics: –

Good mechanical resistance to impacts – Good cable flexibility – Min radius. of

curvature: 12 (xD)

Identification



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Outer cover (Cover): Black;

1 conductor: insulation in natural color. 3

conductors: through colored ribbons (white, blue and red) applied under the metal shield, or insulation in white, blue and red or numbered black veins.

– OTHER COLORS ON REQUEST.

Applicable Specifications

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

ABNT:NBR 11137

ABNT NBR NM 280

ABNT NBR 6251

ABNT NBR 14039

Applications

INNOVNAX medium voltage cables are the ideal solution for medium voltage distribution networks, offering versatility and efficiency in various applications, such as:

- Underground distribution networks: Guarantee reliability and safety in challenging environments.



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- Dealer systems: Meet strict technical and required performance.
- Industrial installations: Provide stable and safe energy for processes productive.
- Large consumers: They meet energy demand efficiently and economic.

With cutting-edge technology and proven quality, INNOVNAX cables stand out as the best technical and economic alternative for medium voltage distribution networks, meeting the needs of different sectors and ensuring reliable and safe energy supply.

High Performance Electrical Cable for Distribution Networks

The 3.6/6kV to 20/35kV electrical cable is the ideal solution for power distribution networks, offering high reliability and safety. Composed of:

- Conductor: Bare copper, class 2 or 5, guaranteeing excellent conductivity and durability.
- Insulation: HEPR thermoset compound (Ethylene Propylene Rubber), providing high dielectric and thermal resistance.
- Cover: Thermoplastic PVC, protecting the cable against external agents and ensuring longer useful life.

Compliance with Standards:



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- NBR 7286: Guarantees the quality and safety of the cable, meeting the requirements of performance for power cables with extruded rubber insulation ethylenepropylene.
- NBR 14039: Ensures the suitability of the cable for medium-duty electrical installations voltage, from 1.0 kV to 36.2 kV.

Applications:

Ideal for energy distribution networks in:

- Urban areas
- Industries
- Large consumers
- Medium voltage power inputs

Benefits:

- High reliability and security
- Excellent conductivity and durability
- Dielectric and thermal resistance
- Protection against external agents
- Compliance with technical standards
- Application versatility

Invest in quality and safety for your energy distribution network. Choose the high-performance electrical cable!



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Versatility in the Installation of High Performance Electrical Cable

This high-performance electrical cable offers several installation options, adapting to the needs of your project:

Installation in Conduits:

- **Visible conduit:** Ideal for visible installations, facilitating access and maintenance.
- **Buried conduit:** Provides additional protection to the cable in outdoor or underground.
- **Conduit in closed channel:** Organizes the wiring and protects the cable in environments internal.
- **Conduit in ventilated channel:** Allows heat dissipation in installations with high cable density.

Installation in Channels:

- **Closed channel:** Ideal for internal environments, offering protection and organization to the wiring.
- **Ventilated channel:** Allows heat dissipation in high density installations of cables.

Other Installation Options:

- **Directly buried:** Suitable for external or underground areas, with protection additional (e.g. ducts).
- **Tray:** Organizes and protects cable in industrial or commercial installations.



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- **Bed:** Provides support and protection to the cable in areas with vehicle traffic or equipment.
- **Direct fixing:** Allows the cable to be installed on walls or ceilings, safely and organized.

Submerged Installation:

This cable can also be installed in environments submerged in water, partially or completely, intermittently, in up to 1 meter of water column, in accordance with standard NBR 14039 (table 4 AD7).

Important:

Installation must be carried out by qualified professionals, following applicable technical and safety standards.

Maximum Conductor Temperature

The high thermal stability of thermoset insulation (HEPR) allows use in the following conductor temperature conditions:

- Permanent regime: 90 °C
- Overload regime: 130 °C
- Short circuit rating: 250

Notes

- The dimensions shown are nominal and therefore subject to normal manufacturing tolerances;
- It can be manufactured in another section, dimensional or material at the customer's request.
- Innovcable reserves the right to change this catalog without prior notice.

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INNOVNAX 3,6/6KV UNIPOLAR

Seção (mm ²)	Diâmetro nominal condutor (mm) ^[1]	Espessura nominal isolamento (mm)	Diâmetro sobre isolamento (mm)	Diâmetro nominal externo (mm)	Peso (kg/km)	Rcc (20°C)
10	3,7	3,0	11,0	15,8	363	1,83
16	4,8	3,0	12,1	16,9	439	1,15
25	5,9	3,0	13,2	18,0	542	0,727
35	6,8	3,0	14,1	19,0	649	0,524
50	8,1	3,0	15,4	20,2	788	0,387
70	9,7	3,0	17,0	22,0	1007	0,268
95	11,3	3,0	18,6	23,6	1271	0,193
120	12,6	3,0	19,9	25,1	1523	0,153
150	14,1	3,0	21,4	26,6	1799	0,124
185	15,7	3,0	23,0	28,3	2164	0,099
240	18,0	3,0	25,3	30,8	2727	0,0754
300	20,3	3,0	27,6	33,1	3315	0,0601
400	22,7	3,0	30,0	35,7	4117	0,0470
500	26,0	3,2	33,8	39,6	5200	0,0366
630	29,8	3,2	38,1	44,2	6595	0,0283

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INNOVNAX 6/10KV UNIPOLAR

Seção (mm ²)	Diâmetro nominal condutor (mm) ⁽¹⁾	Espessura nominal isolamento (mm)	Diâmetro sobre isolamento (mm)	Diâmetro nominal externo (mm)	Peso (kg/km)	Rcc (20°C)
16	4,8	3,4	13,0	17,8	468	1,15
25	5,9	3,4	14,1	18,9	573	0,727
35	6,8	3,4	15,0	19,9	682	0,524
50	8,1	3,4	16,3	21,3	831	0,387
70	9,7	3,4	17,9	22,9	1045	0,268
95	11,3	3,4	19,5	24,6	1322	0,193
120	12,6	3,4	20,8	26,0	1566	0,153
150	14,1	3,4	22,3	27,7	1856	0,124
185	15,7	3,4	23,9	29,2	2213	0,099
240	18,0	3,4	26,2	31,7	2780	0,0754
300	20,3	3,4	28,5	34,2	3386	0,0601
400	22,7	3,4	30,9	36,8	4194	0,0470
500	26,0	3,4	34,2	40,2	5246	0,0366
630	29,8	3,4	38,5	44,8	6647	0,0283

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INNOVNAX 8,7/15KV UNIPOLAR

Seção (mm ²)	Diâmetro nominal condutor (mm) ⁽¹⁾	Espessura nominal isolamento (mm)	Diâmetro sobre isolamento (mm)	Diâmetro nominal externo (mm)	Peso (kg/km)	Rcc (20°C)
25	5,9	4,5	16,3	21,1	655	0,73
35	6,8	4,5	17,2	22,2	777	0,524
50	8,1	4,5	18,5	23,5	923	0,387
70	9,7	4,5	20,1	25,2	1154	0,268
95	11,3	4,5	21,7	26,8	1428	0,193
120	12,6	4,5	23,0	28,4	1690	0,153
150	14,1	4,5	24,5	29,9	1975	0,124
185	15,7	4,5	26,1	31,6	2351	0,099
240	18,0	4,5	28,4	34,1	2931	0,0754
300	20,3	4,5	30,7	36,4	3532	0,0601
400	22,7	4,5	33,1	39,0	4351	0,0470
500	26,0	4,5	36,4	42,4	5418	0,0366
630	29,8	4,5	40,7	47,0	6838	0,0283

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INNOVNAX 12/20KV UNIPOLAR

Seção (mm ²)	Diâmetro nominal condutor (mm) ⁽¹⁾	Espessura nominal isolamento (mm)	Diâmetro sobre isolamento (mm)	Diâmetro nominal externo (mm)	Peso (kg/km)	Rcc (20°C)
35	6,8	5,5	19,3	24,5	879	0,52
50	8,1	5,5	20,6	25,8	1031	0,387
70	9,7	5,5	22,2	27,3	1258	0,268
95	11,3	5,5	23,8	29,1	1550	0,193
120	12,6	5,5	25,1	30,7	1819	0,153
150	14,1	5,5	26,6	32,2	2110	0,124
185	15,7	5,5	28,2	33,9	2495	0,099
240	18,0	5,5	30,5	36,2	3070	0,0754
300	20,3	5,5	32,8	38,6	3697	0,0601
400	22,7	5,5	35,2	41,3	4527	0,0470
500	26,0	5,5	38,5	44,7	5609	0,0366
630	29,8	5,5	42,8	49,2	7049	0,0283

INNOVNAX 15/25KV UNIPOLAR

Seção (mm ²)	Diâmetro nominal condutor (mm) ⁽¹⁾	Espessura nominal isolamento (mm)	Diâmetro sobre isolamento (mm)	Diâmetro nominal externo (mm)	Peso (kg/km)	Rcc (20°C)
50	8,1	6,8	23,2	28,5	1174	0,387
70	9,7	6,8	24,8	30,1	1410	0,268
95	11,3	6,8	26,4	31,9	1712	0,193
120	12,6	8,8	31,7	33,3	1975	0,153
150	14,1	6,8	29,2	34,9	2289	0,124
185	15,7	6,8	30,8	36,5	2667	0,099
240	18,0	6,8	33,1	39,0	3270	0,0754
300	20,3	6,8	35,4	41,4	3910	0,0601
400	22,7	6,8	37,8	44,0	4754	0,0470
500	26,0	6,8	41,1	47,5	5855	0,0366
630	29,8	6,8	45,4	52,0	7319	0,0283

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INNOVNAX 20/35KV UNIPOLAR

Seção (mm ²)	Diâmetro nominal condutor (mm) ⁽¹⁾	Espessura nominal isolamento (mm)	Diâmetro sobre isolamento (mm)	Diâmetro nominal externo (mm)	Peso (kg/km)	Rcc (20°C)
50	8,1	8,8	27,2	32,7	1417	0,39
70	9,7	8,8	28,8	34,5	1680	0,268
95	11,3	8,8	30,4	36,1	1983	0,193
120	12,6	8,8	31,7	37,6	2272	0,153
150	14,1	8,8	33,2	39,1	2583	0,124
185	15,7	8,8	34,8	40,8	2991	0,099
240	18,0	8,8	37,1	43,3	3616	0,0754
300	20,3	8,8	39,4	45,6	4257	0,0601
400	22,7	8,8	41,8	48,2	5123	0,0470
500	26,0	8,8	45,1	51,6	6251	0,0366
630	29,8	8,8	49,4	56,2	7752	0,0283

INNOVNAX 3,6/6KV TRIPOLAR

Seção (mm ²)	Diâmetro nominal condutor (mm) ⁽¹⁾	Espessura nominal isolamento (mm)	Diâmetro sobre isolamento (mm)	Diâmetro nominal externo (mm)	Peso (kg/km)	Rcc (20°C)
10	3,7	3,0	11,0	32,5	1436	1,83
16	4,8	3,0	12,1	36,4	1959	1,15
25	5,9	3,0	13,2	38,9	2375	0,727
35	6,8	3,0	14,1	41,6	2847	0,524
50	8,1	3,0	15,4	44,5	3404	0,387
70	9,7	3,0	17,0	48,1	4223	0,268

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INNOVNAX 6/10KV TRIPOLAR

Seção (mm ²)	Diâmetro nominal condutor (mm) ⁽¹⁾	Espessura nominal isolamento (mm)	Diâmetro sobre isolamento (mm)	Diâmetro nominal externo (mm)	Peso (kg/km)	Rcc (20°C)
16	4,8	3,4	13,0	38,5	2137	1,15
25	5,9	3,4	14,1	41,0	2565	0,727
35	6,8	3,4	15,0	43,5	3029	0,524
50	8,1	3,4	16,3	46,4	3598	0,387
70	9,7	3,4	17,9	50,3	4458	0,268

INNOVNAX 8,7/15KV TRIPOLAR

Seção (mm ²)	Diâmetro nominal condutor (mm) ⁽¹⁾	Espessura nominal isolamento (mm)	Diâmetro sobre isolamento (mm)	Diâmetro nominal externo (mm)	Peso (kg/km)	Rcc (20°C)
25	5,9	4,5	16,3	46,4	3092	0,727
35	6,8	4,5	17,2	48,7	3558	0,524
50	8,1	4,5	18,5	51,6	4160	0,387
70	9,7	4,5	20,1	55,2	5037	0,268

INNOVNAX 12/20KV TRIPOLAR

Seção (mm ²)	Diâmetro nominal condutor (mm) ⁽¹⁾	Espessura nominal isolamento (mm)	Diâmetro sobre isolamento (mm)	Diâmetro nominal externo (mm)	Peso (kg/km)	Rcc (20°C)
35	6,8	5,5	19,3	53,7	4121	0,524
50	8,1	5,5	20,6	56,5	4755	0,387
70	9,7	5,5	22,2	60,6	5741	0,268