

NGSY 8.7/15 kV PH

Contact

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Cable for underground power distribution and subtransmission.

DESCRIPTION

Application

Underground power distribution and subtransmission. As transformer feeders in substations. In power plants, industrial and operation installations, in residential areas and mining installations, in dry or wet locations.

Construction

1. Conductor: Compact stranded soft copper, class 2.
2. Inner semi-conductor: Extruded.
3. Insulation: Ethylene propylene rubber EPR.
4. External semi-conductor: Extruded strippable.
5. Screen: Copper wires + Copper tape open Helix.
6. Tape: Polyester.
7. Outer sheath: Compound polyvinyl chloride PVC.

Main characteristics

EPR increased safety due to its mechanical strength and toughness of the insulation. Resistance to abrasion, moisture and sunlight. Adequate resistance to greases and oils. Flame retardant.

Cross Section:

35 mm².

Marking:

INDECO S.A. NGSY 8.7/15 kV - Section - PH(Section) - Year - Sequential length.

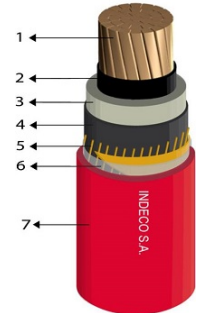
Packing:

Non returnable wooden reels.

Colour:

Insulation: Natural.

Outer sheath: Red.



STANDARDS

International IEC 60228;
IEC 60332-1-2; IEC 60502-2;
IEC 60811-401; IEC 60811-402;
IEC 60811-409; IEC 60811-501;
IEC 60811-502; IEC 60811-504;
IEC 60811-505; IEC 60811-506;
IEC 60811-507; IEC 60811-508;
IEC 60811-509

National NTP-IEC 60228; NTP-IEC 60502-2; UL 1581



Rated Voltage Uo/U (Um)
8.7/15 kV



Bending factor installed
7 (xD)



U.V resistance
UL 1581 - Sunlight Resistance



Flame retardant
IEC 60332-1-2; FT1



Oil resistance
Good



Maximum operating temperature
105 °C

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National standards

NTP-IEC 60228: Conductors of insulated cables.

NTP-IEC 60502-2: Power cables with extruded insulation and their accessories for rated voltages from 6 kV up to 30 kV.

International standards

IEC 60228: Conductors of insulated cables.

IEC 60502-2: Power cables with extruded insulation and their accessories for rated voltages from 6 kV up to 30 kV.

IEC 60332-1-2: Test for vertical flame propagation for a single insulated wire or cable - Procedure for 1 kW pre-mixed flame.

IEC 60811-401: Thermal ageing methods. Ageing in an air oven.

IEC 60811-402: Water absorption tests.

IEC 60811-409: Loss of mass test for thermoplastic insulations and sheaths.

IEC 60811-501: Test for determining the mechanical properties.

IEC 60811-502: Shrinkage test for insulations.

IEC 60811-504: Bending test at low temperature for insulation and sheaths.

IEC 60811-505: Elongation at low temperature for insulations and sheaths.

IEC 60811-506: Impact test at low temperature for insulations and sheaths.

IEC 60811-507: Hot set test for cross-linked materials.

IEC 60811-508: Pressure test at high temperature for insulation and sheaths.

IEC 60811-509: Test for resistance of insulations and sheaths to cracking.

UL 1581: Reference standard for electrical wires, cables, and flexible cords.

Section 1060: FT1 (Vertical-Specimen) Flame Test.

Section 1200: Carbon-Arc and Xenon-Arc Tests- Sunlight resistance.

CHARACTERISTICS

Construction characteristics

Conductor material	Copper
Material of the inner semi-conductor	Extruded
Insulating material	EPR
Material of the external semi-conductor	Extruded strippable



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Construction characteristics

Screen	Copper wire + copper tape
Outer sheath	PVC
Sheath colour	Red

Electrical characteristics

Rated Voltage U ₀ /U (U _m)	8.7/15 kV
Dielectric strength core to screen DC, min.	30.5 kV
Time of application Dielectric strength core to screen DC	5 min.
Voltage for partial discharge test	15 kV
Maximal partial discharge test	10 pC

Usage characteristics

Bending factor when installed	7 (xD)
U.V resistance	UL 1581 - Sunlight Resistance
Flame retardant	IEC 60332-1-2; FT1
Oil resistance	Good
Maximum operating temperature	105 °C
Overload maximum core temperature	140 °C
Short-circuit max. conductor temperature	250 °C

DIMENSIONAL DATA

Cross section [mm ²]	Total nb wires	Screen section [mm ²]	Conductor diam. [mm]	Diam. over insulation [mm]	Diam. over screen [mm]	Diam. over sheath [mm]	Approx. weight [kg/km]
35	7	16	6.82	16.08	19.6	22.2	823

ELECTRICAL DATA - I

Cross section [mm ²]	Max. DC Resist. Cond. 20°C [Ohm/km]	Screen section [mm ²]	Resistance of the screen [Ohm/km]	A.C. Conductor resist. at 105 °C - flat formation [Ohm/km]	A.C. Conductor resist. at 105°C - trefoil formation [Ohm/km]	Phase reactance 60 Hz - flat formation [Ohm/km]	Phase reactance 60 Hz - trefoil formation [Ohm/km]
35	0.524	16	1.15	0.699	0.699	0.2298	0.1601



Rated Voltage U₀/U (U_m)
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ELECTRICAL DATA - II

Cross section [mm ²]	Screen section [mm ²]	Permissible short circuit current screen 0.5s [kA]	Perm. current rating buried 20°C - flat formation [A]	Perm. current rating buried 20°C - trefoil formation [A]	current rating in air 30°C - trefoil [A]	Perm. current rating in air 30°C - flat formation [A]
35	16	2.8	201	170	204	245

PRODUCT LIST

Nexans ref.	Name	Cross section [mm ²]	Conductor diam. [mm]	Screen section [mm ²]	Diam. over insulation [mm]	Diam. over screen [mm]	Diam. over sheath [mm]	Approx. weight [kg/km]
☎ P00025254-0	NGSY 8.7/15 kV 35 mm ² PH16	35	6.82	16	16.08	19.6	22.2	823

☎ = Make to order, 📦 = In stock

BENDING FACTOR INSTALLED

D: Cable outer diameter (mm)

CALCULATION OF CURRENT CONDITION SINGLE CORE M.V. 105°C

CALCULATION OF CURRENT CONDITION

BASED ON ABNT NBR 14039

Maximum conductor temperature: 105°C

Ambient air temperature: 30°C

Ground temperature: 20°C

Depth of laying: 0,9 m

Thermal resistivity of soil: 1,5 K.m/W



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