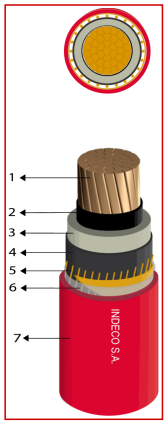
Contact
Local Sales
ventas.peru@nexans.com

NGSY Uo/U(Um) 18/30(36) kV PH6

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: Copper, class 2.
2. Inner semi-conductor: Extruded.
3. Insulation: HEPR.
4. External semi-conductor: Extruded strippable.
5. Screen: Copper wires + copper tape in open spiral.
6. Tape: Polyester.
7. Outer sheath: Compound polyvinyl chloride PVC.

Main characteristics

Conductor temperature of 105ºC for normal operation, 130°C for emergency overload and 250°C for short circuit conditions. Excellent properties against heat aging. Resistance to abrasion, moisture and sunlight. Adequate resistance to greases and oils. Flame retardant.

Gauge:

70 mm²

Marking:

INDECO S.A. NGSY 18/30(36) kV Section - PH6 - Year.

Packing:

Non returnable wooden reels.

Colour:

Insulation: Natural.

Outer sheath: Red.

Standards

International IEC 60228; IEC 60332-1; IEC 60502-2; IEC 60811-1-1; IEC 60811-1-2; IEC 60811-1-3; IEC 60811-1-4; IEC 60811-2-1; IEC 60811-3-1; IEC 60811-3-2

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

National standards

NTP-IEC 60228: Conductors of insulated cables.

Lead free	Rated Voltage Uo/U (Um)	U.V resistance	Flame retardant	Oil resistance	Maximum operating temperature
Yes	18 / 30 (36) kV	UL 1581 - Sunlight Resistance	IEC 60332-1	Good	105 °C

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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 60332-1: Test for vertical flame propagation for a single insulated wire or cable.

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

IEC 60811-1-1: Measurement of thickness and overall dimensions - Test for determining the mechanical properties.

IEC 60811-1-2: Thermal ageing methods.

IEC 60811-1-3: Water absorption tests - Shrinkage test.

IEC 60811-1-4: Tests at low temperature.

IEC 60811-2-1: Ozone resistance, hot set and mineral oil immersion tests.

IEC 60811-3-1: Pressure test at high temperature - Tests for resistance to cracking.

IEC 60811-3-2: Loss of mass test - Thermal stability test.

UL 1581 Section 1200 (Sunlight resistance): Reference standard for electrical wires, cables, and flexible cords - Carbon-Arc and Xenon-Arc Tests- Sunlight resistance.

Characteristics

Construction characteristics	
Conductor material	Copper
Material of the inner semi-conductor	Extruded
Insulating material	HEPR
Material of the external semi-conductor	Extruded strippable
Screen	Copper wire + copper tape
Outer sheath	PVC
Sheath colour	Red
Lead free	Yes
Dimensional characteristics	
Screen section	6 mm²
Electrical characteristics	
Rated Voltage Uo/U (Um)	18 / 30 (36) kV
Resistance of the screen	3.08 Ohm/km

Lead free
Yes


Rated Voltage Uo/U (Um)
18 / 30 (36) kV


U.V resistance
UL 1581 - Sunlight Resistance


Flame retardant
IEC 60332-1


Oil resistance
Good


Maximum operating temperature
105 °C

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Usage characteristics	
U.V resistance	UL 1581 - Sunlight Resistance
Flame retardant	IEC 60332-1
Oil resistance	Good
Maximum operating temperature	105 °C

Dimensional and Usage Data

Cross section [mm²]	Total nb wires	Conductor diam. [mm]	Nom. insulation thick. [mm]	Diam. over insulation [mm]	Diam. over screen [mm]	Diam. over sheath [mm]	Approx. weight [kg/km]	Min. bend. rad. installed [mm]
70	19	9.7	8.0	25.4	28.1	31.3	1419	375

Electrical Data - I

Cross section [mm²]	Max. DC Resist. Cond. 20°C [Ohm/km]	A.C. Conductor resist. at 105°C - trefoil formation [Ohm/km]	Phase reactance 60 Hz - trefoil formation [Ohm/km]
70	0.268	0.358	0.159

Electrical Data - II

Cross section [mm²]	Perm. current rating buried 20°C - trefoil formation [A]	current rating in air 30° C - trefoil [A]	short circuit conductor 1s [kA]	short circuit screen 1s [kA]
70	246	307	9.4	.77

Product List

Nexans ref.	Name	Cross section (mm²)	Conductor diam. (mm)	Nom. insulation thick. (mm)	Diam. over insulation (mm)	Diam. over screen (mm)	Diam. over sheath (mm)
P00013068-0	NGSY 18/30 kV 70 mm2 PH6	70	9.7	8.0	25.4	28.1	31.3

= Make to order, = In stock

Maximum voltage of Um(36) kV in systems Categories A and B according to IEC 60502-2

Categories A and B refer to the operating conditions in the system in which the cable is used defined in IEC 60502-2.

Calculation of Current Condition Singlecore M.V. 105°C

CALCULATION OF CURRENT CONDITION

Lead free
Yes


Rated Voltage Uo/U (Um)
18 / 30 (36) kV


U.V resistance
UL 1581 - Sunlight Resistance


Flame retardant
IEC 60332-1


Oil resistance
Good


Maximum operating temperature
105 °C

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NGSY Uo/U(Um) 18/30(36) kV PH6

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

Lead free
Yes

Rated Voltage Uo/U (Um)
18 / 30 (36) kV

U.V resistance
UL 1581 - Sunlight Resistance

Flame retardant
IEC 60332-1

Oil resistance
Good

Maximum operating temperature
105 °C