

NGSY 46 kV PH16

Power distribution in medium voltage.

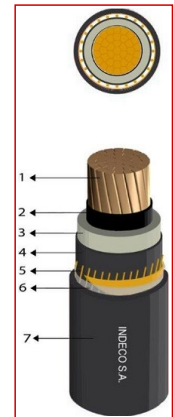
Description

Application

Power distribution in medium voltage. 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 B.
2. Inner semi-conductor: Extruded.
3. Insulation: EPDM.
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.



Standards

International IEC 60332-1

National ASTM B 3; ASTM B 8;
 ICEA S-93-639; UL 1581

Main characteristics

EPDM insulation is more flexible than HEPR. Conductor temperature of 105°C for normal operation, 130°C for emergency overload and 250°C for short circuit conditions. Resistance to abrasion, moisture and sunlight. Adequate resistance to greases and oils. Flame retardant.

Gauge:

4/0 AWG.

Marking:

INDECO S.A. NGSY 46 kV - Gauge - PH16 - Year - Sequential length.

Packing:

Non returnable wooden reels.

Colour:

Insulation: Natural.

Outer sheath: Black.

International standards

ASTM B3: Soft annealed copper wire.

Lead free Yes	Ope. volt. 46 kV	U.V resistance UL 1581 - Sunlight Resistance	Flame retardant IEC 60332-1	Oil resistance Good	Maximum operating temperature 105 °C

NGSY 46 kV PH16

ASTM B8: Concentric-Lay-Stranded copper conductors, hard, medium-hard, or soft.

ICEA S-93-639: 5-46 kV Shielded Power Cable for use in the Transmission and Distribution of Electric Energy.

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

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
Insulation	EPDM
Material of the external semi-conductor	Extruded strippable
Screen	Copper wire + copper tape
Outer sheath	PVC
Sheath colour	Black
Lead free	Yes
Dimensional characteristics	
Screen section	16 mm ²
Electrical characteristics	
Resistance of the screen	1.15 Ohm/km
Operating voltage	46 kV
Usage characteristics	
U.V resistance	UL 1581 - Sunlight Resistance
Flame retardant	IEC 60332-1
Oil resistance	Good
Maximum operating temperature	105 °C

Dimensional Data

Conductor cross-section (AWG)	Total nb wires	Conductor diam. [mm]	Diam. over insulation [mm]	Diam. over screen [mm]	Diam. over sheath [mm]	Approx. weight [kg/km]
4/0	19	12.27	35.47	39.0	44.5	2756



Lead free
Yes



Ope. volt.
46 kV



U.V resistance
UL 1581 - Sunlight
Resistance



Flame retardant
IEC 60332-1



Oil resistance
Good



Maximum operating
temperature
105 °C

NGSY 46 kV PH16

Electrical Data - I

Conductor cross-section (AWG)	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]	Perm. current rating buried 20°C - trefoil formation [A]	current rating in air 30°C - trefoil [A]
4/0	0.1673	0.224	0.1682	315	414

Product List







Nexans ref.	Name	Conductor cross-section (AWG)	Conductor diam. (mm)	Diam. over insulation (mm)	Diam. over screen (mm)	Diam. over sheath (mm)
P00020700-0	NGSY 46 kV 4/0 AWG PH16	4/0	12.27	35.47	39.0	44.5

☎ = Make to order, 📦 = In stock

Calculation of Current Condition 46 kV

CALCULATION OF CURRENT CONDITION BASED ON

Frequency: 60 Hz.
 Maximum conductor temperature: 105°C.
 Ambient air temperature: 30°C.
 Ground temperature: 20°C.
 Depth of laying: 0.9 m.
 Thermal resistance: 1.5 K.m/W.
 Screens bonded at both ends.

					
Lead free Yes	Ope. volt. 46 kV	U.V resistance UL 1581 - Sunlight Resistance	Flame retardant IEC 60332-1	Oil resistance Good	Maximum operating temperature 105 °C