

NGSY 18/30 kV PH25; FB

Contact

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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: Copper, class 5.
2. Inner semi-conductor: Tape and compound 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 105°C 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.

Cross section:

70 mm² - 240 mm².

Marking:

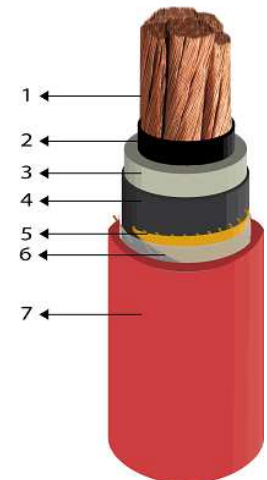
INDECO S.A. NGSY 18/30 kV Section - PH25 - FB - Year.

Packing:

Non returnable wooden reels.

Colour:

Insulation: Natural.



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



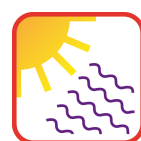
Lead free
Yes



Conductor flexibility
Flexible class 5



Rated Voltage U₀/U
(U_m)
18/30 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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Outer sheath: Red.

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 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



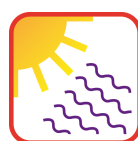
Lead free
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Conductor flexibility
Flexible class 5



Rated Voltage U_0/U
(Um)
18/30 kV



U.V resistance
UL 1581 - Sunlight
Resistance



Flame retardant
IEC 60332-1



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Construction characteristics

Sheath colour	Red
Lead free	Yes
Conductor flexibility	Flexible class 5

Dimensional characteristics

Screen section	25 mm ²
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Electrical characteristics

Rated Voltage U ₀ /U (U _m)	18/30 kV
Resistance of the screen	0.727 Ohm/km
Permissible short circuit current screen 0.5s	4.5 kA

Usage characteristics

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

DIMENSIONAL DATA

Cross section [mm ²]	Conductor diam. [mm]	Diam. over insulation [mm]	Diam. over screen [mm]	Diam. over sheath [mm]	Approx. weight [kg/km]
70	11.26	27.25	30.7	34.1	1659
240	20.66	36.65	40.1	44	3444

ELECTRICAL DATA - I

Cross section [mm ²]	Max. DC Resist. Cond. 20°C [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]
70	0.272	0.363	0.363	0.2243	0.1546
240	0.0801	0.108	0.109	0.1978	0.1281

ELECTRICAL DATA - II

Cross section [mm ²]	Perm. current rating buried 20°C - flat formation [A]	Perm. current rating buried 20°C - trefoil formation [A]	Perm. current rating in air 30°C - flat formation [A]	current rating in air 30°C - trefoil [A]
70	269	234	339	292



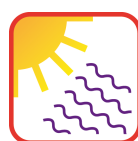
Lead free
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Conductor flexibility
Flexible class 5



Rated Voltage U₀/U (U_m)
18/30 kV



U.V resistance
UL 1581 - Sunlight Resistance



Flame retardant
IEC 60332-1



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Cross section [mm ²]	Perm. current rating buried 20°C - flat formation [A]	Perm. current rating buried 20°C - trefoil formation [A]	Perm. current rating in air 30°C - flat formation [A]	current rating in air 30°C - trefoil [A]
240	503	458	740	638

PRODUCT LIST

Nexans ref.	Name	Cross section [mm ²]	Conductor diam. [mm]	Diam. over insulation [mm]	Diam. over screen [mm]	Diam. over sheath [mm]
☎ P00022857-0	NGSY 18/30 kV 70 mm ² PH25	70	11.26	27.25	30.7	34.1
☎ P00022858-0	NGSY 18/30 kV 240 mm ² PH25	240	20.66	36.65	40.1	44

☎ = Make to order, 📦 = In stock

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



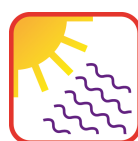
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