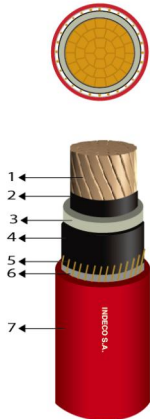


N2XSY 18/30 kV WS

N2XSY 18/30 kV 120 mm² PH12



Nexans Ref.: P00004605-16
Country Ref.: 10031659

CONTACT

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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 locations.

STANDARDS

PRODUCT

NTP-IEC 60228; NTP-IEC 60502-2; IEC 60228; IEC 60502-2

TEST

IEC 60332-1-2; 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; ICEA S-93-639; UL 2556

CONSTRUCTION

1. Conductor: Compact stranded soft copper, class 2.
 2. Inner semi-conductor: Extruded.
 3. Insulation: Cross linked polyethylene XLPE-TR (Tree retardant).
 4. External semi-conductor: Extruded strippable.
- These last three components extruded CV (continuous vulcanization) triple extrusion in dry cure process.
5. Screen: Copper wires.
 6. Tape: Polyester.
 7. Outer sheath: Compound polyvinyl chloride PVC.

MAIN CHARACTERISTICS

Excellent properties against heat aging. Resistance to abrasion, moisture and sunlight. Adequate resistance to greases and oils. Flame retardant.

CROSS SECTION

From 50 mm² up to 500 mm².

MARKING

INDECO BY NEXANS N2XSY 18/30 kV - Section - PH(Screen section) - Year - Sequential length.



Conductor flexibility
 Class 2 IEC 60228



Rated Voltage U₀/U (Um)
 18 / 30 (36) kV



Oil resistance
 ICEA S-93-639



U.V resistance
 UL 2556 - Sunlight Resistance



Maximum operating temperature
 90 °C



Flame retardant
 IEC 60332-1-2; FT1

PACKING

Non returnable wooden reels.

COLOUR

Insulation: Natural.

Outer sheath: See identification on product list.

PRODUCT 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.

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.

TESTING STANDARDS

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

UL 2556: Wire and Cable Test Methods. **Section 9.3:** FT1 (Vertical-Specimen) Flame Test.

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

IEC 60811-402: Water absorption test.

IEC 60811-409: Mass loss test for thermoplastic insulations and covers.

IEC 60811-501: Test for determining the mechanical properties of insulating and sheathing.

IEC 60811-502: Shrinkage test for insulations.

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

IEC 60811-505: Low temperature elongation test for insulations and covers.

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

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

IEC 60811-508: High temperature pressure tests for insulations and covers.

IEC 60811-509: Tests of resistance to cracking of the insulations and covers (thermal shock).

ICEA S-93-639: 5-46 kV Shielded Power Cable for Use in the Transmission and Distribution of Electric Energy. **Section 9.4.2:** Oil Immersion Test.

UL 2556: Wire and Cable Test Methods. **Section 4.2.8.5:** Carbon-Arc and Xenon-Arc Tests- Sunlight resistance.

CHARACTERISTICS

Construction characteristics

Conductor material	Soft copper
Material of the inner semi-conductor	Extruded

Construction characteristics

Insulating material	XLPE-TR
Material of the external semi-conductor	Extruded strippable
Screen	Copper wires / 6mm ²
Outer sheath	PVC
Sheath colour	Red
Conductor flexibility	Class 2 IEC 60228
Conductor shape	Compact stranded

Dimensional characteristics

Conductor cross-section	120 mm ²
Total number of wires	37
Screen section	12 mm ²
Conductor diameter	12.8 mm
Diameter over insulation	29.5 mm
Diameter over screen	32.5 mm
Diameter over Sheath	36 mm
Approximate weight	1933 kg/km
Number of cores	1

Electrical characteristics

Rated Voltage U ₀ /U (U _m)	18 / 30 (36) kV
Dielectric strength core to screen AC	63.0 kV
Time of application Dielectric strength core to screen AC	5 min.
Voltage for partial discharge test	31.1 kV
Maximal partial discharge test	10 pC
A.C. Conductor resist. at 90 °C - flat formation	0.1958 Ohm/km
A.C. Conductor resist. at 90 °C - trefoil formation	0.196 Ohm/km
Impulse voltage	170 kV
Max. DC resistance of the conductor at 20°C	0.153 Ohm/km
Nominal capacitance	196.0 pF/m
Perm. current rating buried 20°C - flat formation	332 A
Perm. current rating buried 20°C - trefoil formation	323 A
Perm. current rating in air 30°C - flat formation	500 A
Perm. current rating in air 30°C - trefoil formation	417 A
Permissible short circuit current screen 0.5s	2.2 kA
Phase reactance 60 Hz - flat formation	0.2171 Ohm/km
Phase reactance 60 Hz - trefoil formation	0.1474 Ohm/km
Resistance of the screen	1.5 Ohm/km

Usage characteristics

Oil resistance	ICEA S-93-639
U.V resistance	UL 2556 - Sunlight Resistance
Maximum operating temperature	90 °C
Short-circuit max. conductor temperature	250 °C
Midspan	No

Fire safety characteristics

Flame retardant

IEC 60332-1-2; FT1

CALCULATION OF CURRENT CONDITION SINGLE-CORE M.V.**CALCULATION OF CURRENT CONDITION BASED ON NTP-IEC 60502-2 Annex B**

Maximum conductor temperature: 90°C.

Ambient air temperature : 30°C.

Ground temperature : 20°C.

Depth of laying : 0,8 m.

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

Screens bonded at both ends.

In the case of different conditions, the correction factors indicated by this standard must be applied.

RECOMMENDATION - M.V. CABLE ACCESSORIES

Technical information presented herein is for referential purposes. Actual dimensions and construction details will be available only with the test reports for each manufacturing order. For "Make To Stock" products it is recommended to measure relevant dimensions directly on the cable. Nexans will not assume responsibility for connector selection.