

TECHNICAL SPECIFICATION

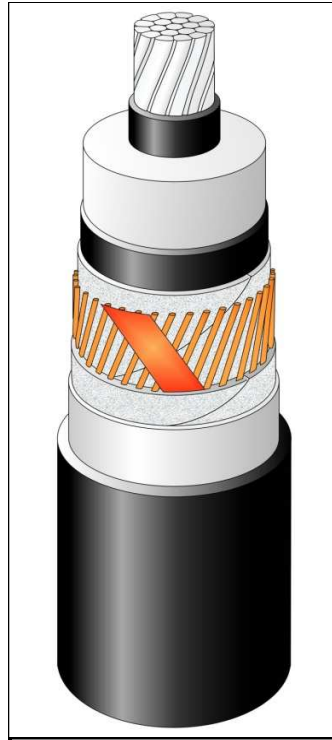
A2XS(FL)2Y-SC 1x300RM/120 76/132(145)kV IEC 60840 - 18mm

CONSTRUCTION[Ⓝ]

- Round, stranded and compacted, aluminium conductor - class 2
- Extruded semi-conducting conductor screen
- Insulation XLPE- dry cured
- Extruded semi-conducting insulation screen
- Semi-conducting swelling tape(s)
- Metallic screen:
 - copper wire screen
 - copper equalizing tape(s)
- Semi-conducting swelling tape(s)
- Longitudinal aluminium tape
- Outer sheath - black HDPE
- Semi-conducting layer

MARKING

Cable manufacturer, product name, standard, year of manufacture, meter marking



The picture is informative only - not in scale

Highest permissible conductor temperature

- Continuous operation 90°C
- Short circuit 250°C
(duration max 5 sec.)

APPLICATION

- Laying in ground
- Laying in ducts
- Laying in air

Laying under Tele-Fonika supervising. Ambient laying temperature not lower than - 5°C, cable temperature during laying not lower than 0°C.

DESCRIPTION	UNIT	DETAILS
CONSTRUCTION DATA		
Conductor		
<input type="checkbox"/> material		Al
<input type="checkbox"/> number of wires	No	34
Conductor nominal cross sectional area	mm ²	300
Conductor diameter and tolerance	mm	20,0 +0,3
Min./Nom. thickness of semi-conducting screen on conductor	mm	0,8 / 1,2
Approximate diameter over screen on conductor	mm	22,0
XLPE Insulation thickness: nominal	mm	18,0
XLPE Insulation thickness: minimum at point	mm	16,2
Nominal diameter over insulation	mm	58,4
Min./Nom. thickness of semi-conducting screen on insulation	mm	0,6 / 1,0
Approximate diameter over screen on insulation	mm	60,0
Thickness of semi-conducting swelling tape	No x mm	2 x ~ 0,35
Metallic screen	mm ²	120
<input type="checkbox"/> copper wires	No x mm	58 x 1,63
<input type="checkbox"/> copper equalizing tapes	No x mm x mm	2 x 0,18 x 10
Nominal diameter over metallic screen	mm	64,6
Thickness of semi-conducting swelling tape	No x mm	2 x ~ 0,35
Thickness of aluminium tape	mm	0,2
Nominal diameter over aluminium tape	mm	66,0
Outer sheath thickness nominal / minimum at point	mm	3,3 / 2,7
Approximate thickness semi-conducting layer	mm	~ 0,8
Approximate overall diameter of complete cable (Dk)	mm	74,6
Approximate weight of complete cable	kg/km	5587
DELIVERY DATA		
Diameter of wooden drum	m	3,0
<input type="checkbox"/> type		30
Offered length per drum	m	840
Overall weight (drum + cable)	kg	7000

[Ⓝ] all dimensions are calculated values

ELECTRICAL DATA at 50 [Hz]		
Maximum D.C. conductor resistance at 20°C	Ω/km	0,1000
Maximum A.C. conductor resistance at 90°C	Ω/km	0,1290
Maximum D.C. metallic screen resistance at 20°C	Ω/km	0,149
Maximum D.C. longitudinal aluminium tape resistance at 20°C	Ω/km	0,628
Inductance		
<input type="checkbox"/> flat formation (*)	mH/km	0,640
<input type="checkbox"/> trefoil formation	mH/km	0,455
Induction reactance		
<input type="checkbox"/> flat formation (*)	Ω/km	0,201
<input type="checkbox"/> trefoil formation	Ω/km	0,143
Capacitance	μF/km	0,139
Capacitance reactance	kΩ/km	22,9
Impedance		
<input type="checkbox"/> flat formation (*)	Ω/km	0,239
<input type="checkbox"/> trefoil formation	Ω/km	0,192
Zero sequence reactance	Ω/km	0,090
Max. electric stress on conductor screen / insulation	kV/mm	7,08 / 2,72
Dielectric losses (tg = 0.001) - per phase	W/m	0,25
Partial discharges level - at 1.5 U _o	pC	≤5
Charging current - per phase	A/km	3,3
Charging power - per phase	kVA/km	252,5
Capacitive earth fault current	A/km	10,0
MECHANICAL DATA		
Recommended min. bending radius for laying	m	1,87
Recommended permissible bending radius at final installation	m	1,49
Maximum permissible pulling force	kN	9,0
SHORT CIRCUIT CURRENTS		
Maximum permissible short circuit current (acc. to IEC 60949)		
Duration time	s	1,0
Conductor 90 → 250°C	kA	28,8
Metallic screen 80 → 350°C	kA	23,5
AMPACITY(**) - bonding of metallic screen		Single-point / Both-ends
In earth		
<input type="checkbox"/> flat formation (*)	A	502 / 435
<input type="checkbox"/> trefoil formation	A	476 / 457
In air		
<input type="checkbox"/> flat formation (*)	A	621 / 565
<input type="checkbox"/> trefoil formation	A	561 / 546
ELECTRICAL TESTS		
AC voltage test (2.5 U _o / 30 minutes)	kV	190
Partial discharge test at 1.5 U _o	kV	114

Marking: **TF KABLE 5 A2XS(FL)2Y-SC 1x300RM/120 76/132(145)kV IEC 60840 2014**

(*) Distance between cable axes laid in flat formation D_k+D_k mm

(**) Current rating guideline (Calculated by CymCap 5.3 according to IEC Pub. 60287)

Natural operating conditions:

- ground temperature 20°C
- laying depth 1.0 m
- ground thermal resistivity 1.0 K•m/W
- ambient air temperature 35°C

Date: 07.03.2014

Specification ID: LT14048

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