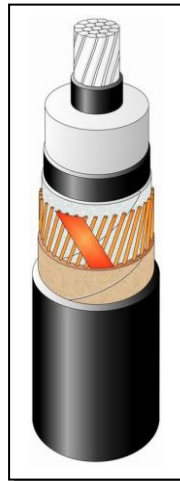


TECHNICAL SPECIFICATION
for Longitudinally Sealed Single Core Cables
type A2XS(F)2Y 1 x 300RM/25 mm² U_o/U(U_m) = 20.3/35(42)kV
on the basis of IEC 60502-2:2014 + Customer Requirements
/ PM18147_ /

CONSTRUCTION

- Round, stranded and compacted conductor - Class 2
- Extruded semi-conductive conductor screen
- Insulation XLPE
- Extruded semi-conductive insulation screen
- Semi-conductive swelling tape(s)
- Metallic screen
- Non-conductive swelling tape(s)
- Outer sheath



APPLICATION

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

TEMPERATURE

Conductor

- Continuous operation **90 °C**
- Short circuit **250 °C**
(duration max 5 s)

Metallic screen

- Short circuit **350 °C**
(duration max 5 s)

The picture is informative only – not in scale

DESCRIPTION	UNIT	DETAILS ^{/1}
CONSTRUCTION DATA		
<u>Conductor</u>		
<input type="checkbox"/> Material	-	Aluminium
<input type="checkbox"/> Nominal cross sectional area	mm ²	300
<input type="checkbox"/> Number of wires	No	acc. to EN 60228
<input type="checkbox"/> Conductor diameter	mm	acc. to EN 60228
<input type="checkbox"/> Longitudinally sealed	-	No
<u>Conductor screen</u> ^{/2}		
<input type="checkbox"/> Material	-	semi-cond. polyethylene
<input type="checkbox"/> Minimum at point radial thickness	mm	0.30
<u>Insulation</u> ^{/3}		
<input type="checkbox"/> Material	-	XLPE
<input type="checkbox"/> Nominal / minimum at point radial thickness	mm	8.8 / 7.82
<input type="checkbox"/> Diameter over insulation	mm	37.6
<u>Insulation screen</u> ^{/3}		
<input type="checkbox"/> Type	-	FULL BONDED
<input type="checkbox"/> Material	-	semi-cond. polyethylene
<input type="checkbox"/> Maximum / minimum at point radial thickness	mm	0.60 / 0.30
<u>Metallic screen</u>		
<input type="checkbox"/> Wrapping under Metallic Screen – Material	-	semi - cond. water blocking tape(s)
<input type="checkbox"/> Metallic screen - Material	-	copper (wires and equalizing tape)
<input type="checkbox"/> Diameter over metallic screen	mm	41.2
<input type="checkbox"/> Cross sectional area	mm ²	25
<input type="checkbox"/> Wrapping over Metallic Screen – Material	-	non - cond. water blocking tape(s)
<u>Outer sheath</u>		
<input type="checkbox"/> Material	-	HDPE – colour BLACK
<input type="checkbox"/> Nominal / minimum at point radial thickness	mm	2.5 / 1.8
<input type="checkbox"/> Diameter over sheath (D_k)	mm	≈ 46.3
Weight of complete cable (approx.)	kg / km	≈ 2 180

^{/1} - Diameters are calculated values and subject to manufacturing tolerances

^{/2} - Triple extrusion processes, Dry curing and cooling.

DESCRIPTION	UNIT	DETAILS ¹
ELECTRICAL DATA at 50Hz		
SHORT CIRCUIT CURRENTS		
Max Short Circuit Capacity:		
<input type="checkbox"/> conductor : 90 → 250 °C	kA / 1 sec	28.2
<input type="checkbox"/> metallic screen: → 350 °C	kA / 1 sec	5.3
AMPACITY (In) ³ BOTH-ENDS BONDING (BE) / SINGLE POINT BONDING (SPB)		
GROUND		
<input type="checkbox"/> flat formation	A / A	600 / 614
<input type="checkbox"/> trefoil formation	A / A	593 / 598
AIR		
<input type="checkbox"/> flat formation	A / A	658 / 684
<input type="checkbox"/> trefoil formation	A / A	584 / 588
MECHANICAL DATA		
Recommended min. bending radius for laying	m	15 * D_k * 10⁻³
Recommended permissible bending radius at final installation	m	12 * D_k * 10⁻³
Maximum Cable Pulling Force: ⁴	kN	30 * (No * cross sectional) conductor area * 10⁻³
Lowest recommended temperature during laying:	°C	≥ minus 20
DELIVERY DATA		
Maximum length per TF KABLE drum / Diameter (Type) of wooden drum	m / m	450 / 2.0 (20) 950 / 2.2 (22) 1100 / 2.4 (24)

Prepared by: Mariusz Puchalski – 2018-09-06

³ - Current rating guideline (calculation – CYMCAP Program)

GROUND :

- Ground temperature 20 °C
- Laying depth 0.7 m
- Ground thermal resistivity 1.0 K·m/W / 2.5 K·m/W at critical temperature 50 °C
- Loading 0.7
- FLAT FORMATION - spacing between centre conductor = 70 mm + D_k
- TREFOIL FORMATION – with point of contact

AIR (SHADED cables) :

- Air temperature 30 °C
- Loading 1.0
- FLAT FORMATION – spacing between centre conductor = 2 * D_k
- TREFOIL FORMATION – with point of contact

⁴ - Cable pulling forces by its conductor

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