

TECHNICAL SPECIFICATION
for Single Core Cables
type RHZ1 1 x 400 K Al + H25 Uo/U(Um) = 18/30(36)kV
acc. to HD 620 S2:2010 Part 10 Section E-1
/KB24031_ /

CONSTRUCTION

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



The picture is informative only – not in scale

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)

DESCRIPTION	UNIT	DETAILS ^{/1}
CONSTRUCTION DATA		
<u>Conductor</u>		
<input type="checkbox"/> Material	-	Aluminium
<input type="checkbox"/> Nominal cross sectional area	mm ²	400
<input type="checkbox"/> Number of wires	No	acc. to EN 60228
<input type="checkbox"/> Conductor diameter	mm	acc. to EN 60228
<u>Conductor screen</u> ^{/2}		
<input type="checkbox"/> Material	-	semi-cond. polyethylene
<input type="checkbox"/> Nominal radial thickness	mm	0.3
<u>Insulation</u> ^{/2}		
<input type="checkbox"/> Material	-	XLPE
<input type="checkbox"/> Minimum average / minimum at point radial thickness	mm	8.0 / 7.1
<input type="checkbox"/> Diameter over insulation	mm	40.1
<u>Insulation screen</u> ^{/2}		
<input type="checkbox"/> Type	-	STRIPPABLE
<input type="checkbox"/> Material	-	semi-cond. polyethylene
<input type="checkbox"/> Nominal radial thickness	mm	0.5
<u>Metallic screen</u>		
<input type="checkbox"/> Wrapping under Metallic Screen – Material	-	semi - cond. tape(s)
<input type="checkbox"/> Metallic screen - Material	-	copper (wires and equalizing tape)
<input type="checkbox"/> Diameter over metallic screen	mm	44.4
<input type="checkbox"/> Cross sectional area	mm ²	25
<input type="checkbox"/> Wrapping over Metallic Screen – Material	-	polyester tape(s)

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

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

DESCRIPTION	UNIT	DETAILS ^{/1}
Outer sheath		
<input type="checkbox"/> Material	-	HDPE (DMZ1) – colour RED
<input type="checkbox"/> Nominal / minimum at point radial thickness	mm	3.0 / 2.2
<input type="checkbox"/> Diameter over sheath - completed cable (D_k)	mm	50.2
Weight of complete cable (approx.)	kg / km	2 640
SHORT CIRCUIT CURRENTS		
Max Short Circuit Capacity:		
<input type="checkbox"/> conductor : 90 → 250 °C	kA / 1 s	37.8
<input type="checkbox"/> metallic screen: → 350 °C	kA / 1 s	5.3
MECHANICAL DATA		
Recommended min. bending radius for laying	m	20 * D_k * 10⁻³
Recommended permissible bending radius at final installation	m	15 * D_k * 10⁻³
Maximum Cable Pulling Force: ^{/3}	kN	30 * (No*cross sectional) conductor area * 10⁻³
Lowest recommended temperature during laying:	°C	≥ 0
DELIVERY DATA		
Length per drum / Diameter (Type) of wooden drum	m / m	550 / 2.0 (20A) 790 / 2.2 (22) 930 / 2.4 (24) 1100 / 2.4 (24A) 1360 / 2.8 (28) 1840 / 3.0 (30)

Prepared by: Kamil Balcer – 2024-02-12

^{/3} - Cable pulling forces by its conductor