

ÖLFLEX DC ESS SC

LK191118-1C

Version: 1 Date: 07.04.2020

1. Designation

ÖLFLEX DC ESS SC
(Energy Storage System)

2. Application

ÖLFLEX DC ESS SC are UV, ozone and weather resistant, double insulated single core cables for Energy Storage System applications. They are used for the fixed installation of Energy Storage System with working voltages up to DC 1.8kV.

3. Design

- Conductor:** Fine wire strands of non-porous tinned copper wires according IEC 60228, Class 5
Conductor resistance according VDE 00295, Class 5
- Core insulation:** Electron beam cross-linked polymer compound, halogen free acc. to EN 50525-1
Insulation compound type: EI 110
Core thickness see table on page 2
Core colour: white
- Outer sheath:** Electron beam cross-linked Co-Polymer, halogen free acc. to EN 50525-1 and
flame retardant acc. to IEC 60332-1-2, IEC 60332-3-24
Outer sheath compound type: EM 104
Wall thicknesses and diameters see table on page 2
Outer sheath colour: Black

The outer sheath is tight-fit extruded and must be strippable from the core insulation at least by a longitudinal cut. The surface of the sheath must be glossy, low adhesive, plane and round.

4. Technical data

Nominal voltage U_0/U	1.5 / 1.5 kV DC according to EN 50618
Max. DC voltage	DC 1.8 kV (conductor/conductor, non earthed system) according to EN 50168
Test voltage	AC 6.5 kV
Minimum bending radius	Static use: 5 x cable diameter Occasional flexing: 15 x cable diameter
Temperature range	Fixed installation -40°C up to +120°C (min. 20 000h acc. IEC 60216-2)

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Ambient temperature	-40°C up to +90°C
Max. conductor temperature	+120°C
Flammability	Flame retardant according to IEC 60332-1-2, IEC 60332-3-24

5. Dimensions

Insulation colour	Jacket colour	Cross- Section [1 X mm ²]	Nom. core wall thick- ness average [mm]	Nom. jacket wall thickness average [mm]	Outer Diameter [mm]
white	black	1 x 1.5	0.7	0.8	4.6
white	black	1 x 2.5	0.7	0.8	5.0
white	black	1 x 4	0.7	0.8	5.4
white	black	1 x 6	0.7	0.8	6.0
white	black	1 x 10	0.7	0.8	7.2
white	black	1 x 16	0.7	0.9	8.7
white	black	1 x 25	0.9	1.0	10.6
white	black	1 x 35	0.9	1.1	12.2
white	black	1 x 50	1.0	1.2	14.4
white	black	1 x 70	1.1	1.2	16.4
white	black	1 x 95	1.1	1.3	18.4
white	black	1 x 120	1.2	1.3	20.2
white	black	1 x 150	1.4	1.4	22.4
white	black	1 x 185	1.6	1.6	25.2
white	black	1 x 240	1.7	1.7	28.6
white	black	1 x 300	2.0	1.9	32.0
white	black	1 x 400	2.0	2.0	36.8

6. GENERAL REQUIREMENTS

RoHS: Dangerous and forbidden substances according to EC-Directive 2011/65/EU regarding Restriction of the use of certain hazardous substances (**RoHS**), are not allowed during manufacturing.

REACH: All materials used in the manufacturing process of the product are subject to the EC-Regulation No. 1907/2006 regarding Registration, Evaluation, Authorization and Restriction of Chemicals (**REACH**). If substances based on the current Candidate List are used, they must be listed with their designation and their concentration.

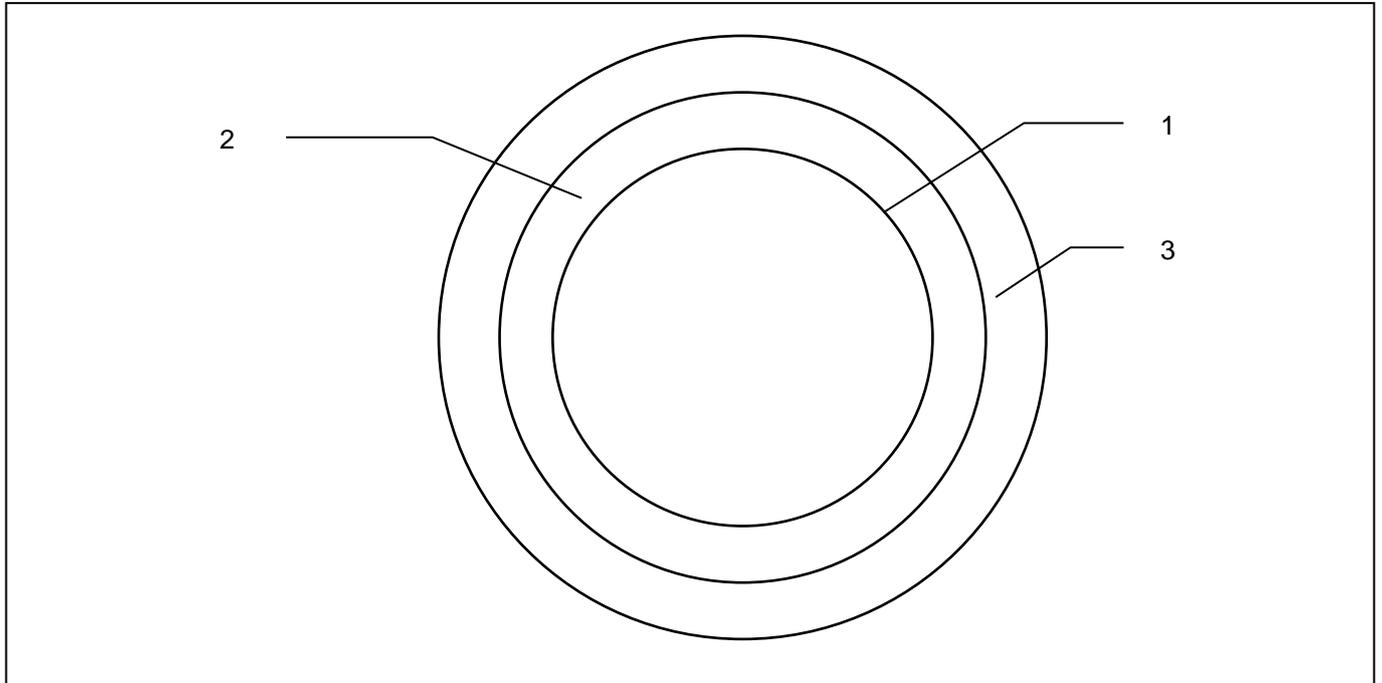
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7. Drawing



Rep	Component description	mm	Features
1	<p><u>Conductor</u> Tinned copper acc. to IEC 60228 Cl.5</p>		<p><u>Standard</u> IEC 60228 for conductor IEC 60332-1-2, IEC 60332-3-24 for flame retardant</p>
2	<p><u>Insulation</u> E-Beam Cross linked Polyolefin compound, Halogen free Color is white</p>		<p><u>Electric Characteristic</u> Operation voltage is DC 1500 V Testing voltage is AC 6.5 kV</p>
3	<p><u>Sheath</u> E-Beam Cross linked Polyolefin compound, Halogen free Color is Black</p>		<p><u>General Characteristic</u> Temperature range: -40°C up to 120°C Min. bending Radius: 5 x ODmm</p> <p><u>Cable Marking</u> ‡ LAPP KABEL STUTTGART ÖLFLEX DC ESS SC DC 1500V SQMM 0000M RV</p>