

ÖLFLEX® TRAIN 4GKW C

LK 19041701RD

Version: 00

Date: 17.04.2019

1. Designation

ÖLFLEX® TRAIN 4GKW C

2. Application

For fixed installations inside of rail vehicles and buses. These cables with very small outer diameter are used where space is very limited.

Typical applications are power supply and traction motor of trains and buses.

3. Design

- Conductor : Fine wire strands of non-porous tinned copper wires according IEC 60228, Class 5
- Conductor resistance according VDE 0295, Class 5
- Separator tape (if necessary)
- Core insulation : electron beam cross-linked polymer compound, halogen free and flame retardant
The insulation colour is natural.
- Shield : tinned copper braiding
- Core sheath : electron beam cross-linked polymer compound, halogen free and flame retardant
The sheath colour is black.

4. Technical data

Nominal voltage U_0/U (AC)	1.8/3kV AC
Nominal voltage V_0 (DC)	2.7V DC
Test voltage	6.5 kV
Temperature range	fixed installation : -40 °C up to +125 °C max. occasional flexing -35 °C up to +90 °C max.
Short circuit temperature	+200 °C
Minimum bending radius (≤ 12 mm) fixed installation:	3 x cable diameter
occasional flexing:	4 x cable diameter
(> 12 mm) fixed installation:	4 x cable diameter
occasional flexing:	5 x cable diameter

5. Fire performance

BS6853	Interior use	la,lb,II
	Exterior use	la,lb,II
Vertical flame spread of bunched wires and cables		BS 6853
Smoke density		BS 6853 appendix D
Toxicity of gases		BS 6853 appendix B R < 1.0

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6. Cable make up

6.1 Conductor

- Conductor make up: Fine wire strands of tinned copper according to IEC 60228/EN 60228 resp. VDE 0295 class 5
- Conductor resistance acc. to EN 60228 resp. VDE 0295 class 5+6 for tinned copper wires
- Separator tape (if necessary)

6.2 Core insulation

- Insulation: temperature resistant electron beam cross-linked polymer, halogen free and highly flame retardant
Manufacturer and compound designation:
- EI 110 grade (Acc. to EN 50264-1)
- Colours : natural

6.3 Shield

- tinned copper braid (over 80% optical coverage)
- separating tape wrapping or talc powder (if necessary)

6.4 Core sheath

- Sheath: temperature resistant electron beam cross-linked polymer, halogen free and highly flame retardant
Manufacturer and compound designation:
- EM 104 grade (Acc. to EN 50264-1)
- Colours : black

6.5 Dimension

Conductor	Insulation	Sheath	Outer diameter
Cross section (mm ²)	Thickness (mm)	Thickness (mm)	Approx. (mm)
1.5	0.8	0.7	5.2
2.5	0.8	0.7	5.6
4	0.9	0.8	6.5
6	1.2	0.9	8.0
10	1.4	0.9	9.4
16	1.4	0.9	11.0
25	1.6	1.1	13.2
35	1.6	1.1	14.6
50	1.6	1.1	16.9
70	1.6	1.1	18.7
95	1.6	1.1	20.7
120	2.0	1.1	23.1

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Conductor	Insulation	Sheath	Outer diameter
Cross section	Thickness	Thickness	Approx.
(mm ²)	(mm)	(mm)	(mm)
150	2.0	1.4	25.5
185	2.1	1.4	27.9
240	2.1	1.4	30.8
300	2.2	1.6	34.1

7. Common 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 shall be listed with their designation and their concentration.