ÖLFLEX® TRAIN 4GKW

LK 12111604RD
Version: 08 **Date:** 09.Dec.2025

1. Designation

ÖLFLEX® TRAIN 4GKW

2. Application

For protected installations inside and outside of rail vehicles and buses and other rail vehicles used for the connection of fixed and moved parts. Suitable for the wiring of switchboards, converters and distribution boxes. Due to the double-insulated design, these cables can be classified as short circuit and earth fault-proof. The thin outer layer protects against the effects of mineral oil fuels and ozone.

3. Design

- Norm references:	EN 50264-3-1, type OM
- Conductor:	Fine wire strands of non-porous tinned copper wires according to IEC 60228, Class 5 Conductor resistance according to VDE 0295, Class 5 Separator tape (if necessary)
- Inner insulation:	Electron beam cross-linked polymer compound, halogen free and flame retardant The insulation colour: White
- Outer insulation:	Electron beam cross-linked polymer compound, halogen free and flame retardant, UV resistance The sheath colour: Black

4. Technical data

Nominal voltage U_0/U (U_m)		1.8/3 (3.6) kV AC	
Nominal voltage V_0/V		2.7/5.4 kV DC	
Test voltage		6.5 kV	
Temperature range		Fixed installed: -40 °C up to +125 °C max.	
		Occasional flexing: -35 °C up to +90 °C max.	
Short circuit temperature		+200 °C	
Minimum bending radius	(≤12mm)	Fixed installation:	3 x cable diameter
		Occasional flexing:	4 x cable diameter
	(>12mm)	Fixed installation:	4 x cable diameter
		Occasional flexing:	5 x cable diameter

5. Fire performance

BS6853	Interior use	Ia,Ib,II
	Exterior use	Ia,Ib,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
EN 45545-2	hazard level	HL 1, HL 2, HL 3
Vertical flame propagation for a single insulated wire or cable		EN 60332-1-2

Vertical flame spread of bunched wires and cables	EN 50305
Smoke density	EN 61034-2
Toxicity of gases	EN 50305

NFPA 130

Vertical flame spread of bunched wires and cables	FT4/IEEE1202
Smoke density	ANSI/UL1685
Toxicity of gases	BSS-7239

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 for tinned copper wires
- Separator tape (if necessary)

6.2 Inner insulation

- Material: Temperature resistant electron beam cross-linked polymer, halogen free and highly flame retardant
  Manufacturer and compound designation:
- Colours: White

6.3 Outer insulation

- Material: Temperature resistant electron beam cross-linked polymer, halogen free and highly flame retardant
  Manufacturer and compound designation:
- Colours: Black

6.4 Dimension

Part no.	Conductor	Inner Insulation	Outer Insulation	Outer diameter
	Cross section (mm²)	Thickness (mm)	Thickness (mm)	Approx. (mm)
85165001	1.5	0.6	0.4	3.6
85165002	2.5	0.6	0.4	4.0
85165003	4	0.6	0.4	4.5
85165004	6	0.7	0.4	5.3
85165005	10	0.8	0.4	6.5
85165006	16	0.8	0.6	8.6
85165007	25	0.9	0.7	10.3
85165008	35	1.0	0.7	11.9

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Part no.	Conductor	Inner Insulation	Outer Insulation	Outer diameter
	Cross section (mm²)	Thickness (mm)	Thickness (mm)	Approx. (mm)
85165009	50	1.0	0.8	14.3
85165010	70	1.0	0.8	16.2
85165011	95	1.0	0.8	18.1
85165012	120	1.2	0.9	20.4
85165013	150	1.2	0.9	22.2
85165014	185	1.2	1.1	24.6
85165015	240	1.2	1.1	27.5
85165016	300	1.3	1.2	30.6
85165017	400	1.3	1.3	34.3

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.