


15355000	DATA SHEET	
Valid from: 14.09.2018	ÖLFLEX® TRAIN 355 C 300V	

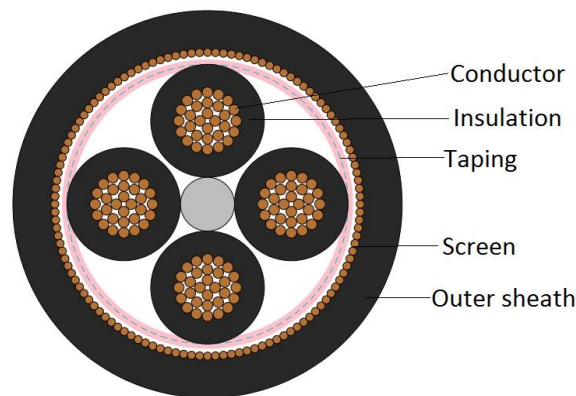
Application

ÖLFLEX® TRAIN 355 C are halogen-free, highly flame retardant cables for use in railway vehicles and buses. They are designed for fixed installation and for applications, where limited movement may occur. They are particularly used in areas, where human and animal life as well as valuable property are exposed to high risk of fire hazards. ÖLFLEX® TRAIN 355 C are oil-, fuel-, acid- and alkali resistant acc. to EN 50264-3-2. The screen is a protection against electrical interference.

Application range:

railway vehicles and buses: connecting lamps, heating equipment, switchgear, terminal boxes and power supply

Design




Design	according to EN 50264-3-2, 300 V, MM
Approvals / Norm references	EN 50264-3-2 (VDE 0260-264-3-2). Code designation MM MM = extra low temperature, extra oil and fuel resistant
Classification	EN 45545-2: Hazard Level HL1, HL2, HL3 NF F 16-101: Internal Category A1, A2, B External Category A1, A2, B Category C for flame propagation Category F0 for smoke
Conductor	fine wire strands of tinned copper acc. to IEC/EN 60228 resp. VDE 0295, Class 5
Core isolation	electron beam cross-linked polymer compound EI 109 acc. to EN 50264-1
Core identification	black cores with white numbers acc. to DIN EN 50334 resp. VDE 0293-334
Taping	plastic foil
Screen	braid of tinned copper, coverage = 85% (nominal value)
Outer sheath	electron beam cross-linked polymer compound, halogen free and flame retardant, EM 104 acc. to EN 50264-1 colour: Black, similar RAL 9005

Electrical properties

Nominal voltage	U_0 / U : 300/500 V AC
Max. permissible operating voltage:	U_m : 600 V AC V_0 : 450 V DC
Test voltage	core / core: 2 kV AC; 4.8 kV DC core / screen: 2 kV AC; 4.8 kV DC

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Mechanical and thermal properties

Min. bending radius	fixed installation ≤ 12 mm:	3 x cable diameter
	fixed installation > 12 mm:	4 x cable diameter
	occasional flexing ≤ 12 mm:	4 x cable diameter
	occasional flexing > 12 mm ≤ 20 mm:	5 x cable diameter
	occasional flexing > 20 mm:	6 x cable diameter
Temperature range	fixed installation:	-45 °C up to +120 °C max. conductor temp. (20.000h)
	occasional flexing:	-35 °C up to +120 °C max. conductor temp. (20.000h)
		- 50° according to GOST 33326-2015 and GOST 20.57.406-81 (method 203-1 und 205-1)
Short circuit temperature	max. +200°C (5s)	


Fire protection according to EN 50264-1 / EN 45545:

Classification	EN 45545-2: Hazard Level HL1, HL2, HL3	
Flammability	acc. to EN 60332-1-2 resp. VDE 0482-332-1-2	
No flame propagation acc. to	≥ 12 mm:	EN 60332-3-24 resp. VDE 0482-332-3-24
	> 6 mm und < 12mm:	EN 60332-3-25 resp. VDE 0482-332-3-25
	≤ 6 mm:	EN 50305
Smoke density	acc. to EN 50306-1, light transmission: min. 70% acc. to IEC 61034-2; EN 61034-2	
Halogen-free	acc. to IEC 60754-1; EN 60754-1; EN 50267-2-1 (chlorine and bromine) acc. to EN 60684-2 (fluorine)	
Corrosivity	acc. to EN 50264-1, pH ≥ 4.3 and conductivity ≤ 10µS/mm acc. to IEC 60754-2; EN 60754-2; EN 50267-2-2	
Toxicity	acc. to EN 50264-1 (≤ 3) acc. to EN 50305	

Fire protection according to NF:

Classification	NF F 16-101: Internal Category A1, A2, B External Category A1, A2, B Category C for flame propagation Category F0 for smoke
Flammability	acc. to NF C 32-070, Category C1 and C2
Smoke density	acc. to NF X 10-702
Toxicity	acc. to NF X 70-100

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Material properties

Ozone resistance	acc. to EN 50264-3-2, method B acc. to EN 50305
Mineral oil resistance	acc. to EN 50264-3-2
Fuel resistance	acc. to EN 50264-3-2
Acid and alkali resistance	acc. to EN 50264-3-2
UV resistance	acc. to EN 50525-1 (VDE 0285-525-1) are cables with black sheath suitable for a permanent outdoor use.
Tests	acc. to EN 50264-3-2
EU Directives	These cables are conform to the EU-Directives 2014/35/EC (Low Voltage Directive)

Art. No.	Number of cores x cross section [mm ²]	Max. wire ø [mm]	Max. conductor resistance (20°C) [Ohm/km]	Conductor ø reference value [mm]	Core ø reference value [mm]	Outer ø [mm]	Fire load reference value [kWh/m]	Weight [kg/km]
15355000	2X1	0.21	20.0	1.3	2.1	6.2 -0.2+0.6	0.14	71
15355001	4X1	0.21	20.0	1.3	2.1	7.2 -0.2+0.6	0.20	109
15355002	7X1	0.21	20.0	1.3	2.1	8.5 -0.3+0.6	0.25	152
15355003	9X1	0.21	20.0	1.3	2.1	10.8 -0.4+0.6	0.43	234
15355004	12X1	0.21	20.0	1.3	2.1	11.3 -0.4+0.6	0.40	258
15355005	19X1	0.21	20.0	1.3	2.1	13.7 -0.4+0.6	0.60	395
15355006	24X1	0.21	20.0	1.3	2.1	15.6 -0.4+0.8	0.71	482
15355007	32X1	0.21	20.0	1.3	2.1	17.1 -0.5+0.7	0.87	606
15355008	37X1	0.21	20.0	1.3	2.1	17.9 -0.5+0.7	0.97	686
15355009	40X1	0.21	20.0	1.3	2.1	19.4 -0.6+0.8	1.20	777
15355010	4X1.5	0.26	13.7	1.6	2.6	8.4 -0.3+0.5	0.26	145
15355011	7X1.5	0.26	13.7	1.6	2.6	10.2 -0.3+0.5	0.33	224
15355012	9X1.5	0.26	13.7	1.6	2.6	13.1 -0.4+0.6	0.65	336
15355013	12X1.5	0.26	13.7	1.6	2.6	13.8 -0.4+0.6	0.59	371
15355014	19X1.5	0.26	13.7	1.6	2.6	16.2 -0.5+0.7	0.81	548
15355015	24X1.5	0.26	13.7	1.6	2.6	18.9 -0.5+0.8	1.06	698
15355016	32X1.5	0.26	13.7	1.6	2.6	20.8 -0.6+0.8	1.35	892
15355017	37X1.5	0.26	13.7	1.6	2.6	21.8 -0.6+0.8	1.48	994
15355018	4X2.5	0.26	8.21	2.0	3.0	9.6 -0.3+0.6	0.30	220
15355019	7X2.5	0.26	8.21	2.0	3.0	11.6 -0.4+0.7	0.39	311
15355020	9X2.5	0.26	8.21	2.0	3.0	14.9 -0.4+0.7	0.76	478
15355021	12X2.5	0.26	8.21	2.0	3.0	15.7 -0.5+0.8	0.67	530
15355022	19X2.5	0.26	8.21	2.0	3.0	18.6 -0.5+0.8	1.00	795
15355023	24X2.5	0.26	8.21	2.0	3.0	21.3 -0.5+1.1	1.26	999

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