

15340000	DATA SHEET	
Valid from: 12.08.2022	ÖLFLEX® TRAIN 340 600V	

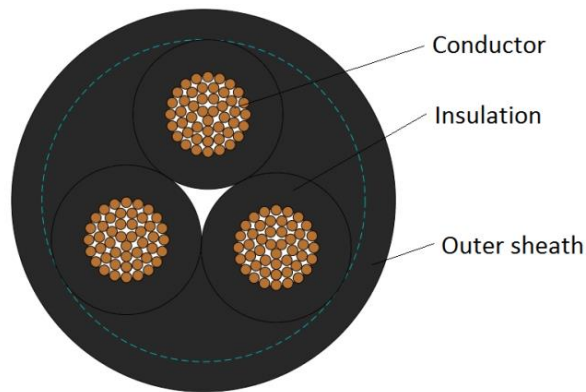
Application

Design ÖLFLEX® TRAIN 340 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 340 are oil-, fuel-, acid- and alkali resistant acc. to EN 50264-3-2.

Application range:

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

Design



Design	acc. to EN 50264-3-2, 600V, MM
Norm references	EN 50264-3-2. 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: depending on dimension (see table) 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 60228 resp. EN 60228, Class 5
Core isolation	electron beam cross-linked polymer compound EI 109 acc. to EN 50264-1
Core identification	acc. to EN 50264-3-2, with or without GN/YE ground conductor black cores with white numbers acc. to DIN EN 50334
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 : 0.6/1 kV AC
Max. permissible operating voltage:	U_m : 1.2 kV AC V_0 : 0.9 kV DC
Test voltage	core / core: 3.5 kV AC; 8.4 kV DC

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Mechanical and thermal properties

Min. bending radius	fixed installation ≤ 12 mm:	3 x outer diameter
	fixed installation > 12 mm:	4 x outer diameter
	occasional flexing ≤ 12 mm:	4 x outer diameter
	occasional flexing > 12 mm ≤ 20 mm:	5 x outer diameter
	occasional flexing > 20 mm:	6 x outer 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° acc. 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 acc. to EN 50264-1 / EN 45545:

Classification	EN 45545-2: Hazard Level HL1, HL2, HL3	
Flammability	acc. to	IEC 60332-1-2 resp. EN 60332-1-2
No flame propagation acc. to	≥ 12 mm:	IEC 60332-3-24 resp. EN 60332-3-24
	> 6 mm und < 12 mm:	IEC 60332-3-25 resp. EN 60332-3-25
	≤ 6 mm:	EN 50305
Smoke density	acc. to EN 50264-1, 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 $\leq 10\mu\text{S}/\text{mm}$ 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 acc. to NF (depending on dimension, see table):

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 are cables with black sheath suitable for a permanent outdoor use.
Tests	acc. to EN 50264-3-2
General requirements	These cables are conform to the EU Directive 2014/35/EU (Low Voltage Directive)
Environmental information	These cables meet the substance-specific requirements of the EU Directive 2011/65/EU (RoHS).

Art. No.	Number of cores x cross section [mm ²]	Max. wire [Ø]	Max. conduct. resist. (20°C) [Ω/km]	Conductor Ø reference value [mm]	Core Ø reference value [mm]	Outer Ø [mm]	Fire load reference value [kWh/m]	Weight [kg/km]	NF F 16-101
15340040	2X0.5	0.21	40.1	0.95	2.15	5.7 -0.3/+0.5	0.18	49	-
15340041	4X0.5	0.21	40.1	0.95	2.15	6.6 -0.3/+0.5	0.23	69	-
15340042	7X0.5	0.21	40.1	0.95	2.15	7.9 -0.3/+0.5	0.31	102	-
15340043	9X0.5	0.21	40.1	0.95	2.15	9.8 -0.3/+0.5	0.49	151	-
15340044	12X0.5	0.21	40.1	0.95	2.15	10.5 -0.4/+0.6	0.48	164	-
15340045	19X0.5	0.21	40.1	0.95	2.15	12.4 -0.4/+0.6	0.68	242	-
15340046	24X0.5	0.21	40.1	0.95	2.15	14.7 -0.4/+0.6	0.88	312	-
15340047	32X0.5	0.21	40.1	0.95	2.15	16.2 -0.5/+0.7	1.10	399	-
15340048	37X0.5	0.21	40.1	0.95	2.15	17.5 -0.5/+0.7	1.31	470	-
15340049	40X0.5	0.21	40.1	0.95	2.15	18.5 -0.5/+0.7	1.48	520	-
15340050	2X0.75	0.21	26.7	1.15	2.35	6.1 -0.3/+0.5	0.20	59	-
15340051	4X0.75	0.21	26.7	1.15	2.35	7.0 -0.3/+0.5	0.25	83	-
15340052	7X0.75	0.21	26.7	1.15	2.35	8.5 -0.3/+0.5	0.35	127	-
15340053	9X0.75	0.21	26.7	1.15	2.35	10.8 -0.4/+0.6	0.58	193	-
15340054	12X0.75	0.21	26.7	1.15	2.35	11.4 -0.4/+0.6	0.55	208	-
15340055	19X0.75	0.21	26.7	1.15	2.35	13.8 -0.4/+0.6	0.82	319	-
15340056	24X0.75	0.21	26.7	1.15	2.35	15.9 -0.5/+0.7	0.99	392	-
15340057	32X0.75	0.21	26.7	1.15	2.35	17.9 -0.5/+0.7	1.31	521	-
15340058	37X0.75	0.21	26.7	1.15	2.35	18.9 -0.5/+0.7	1.47	591	-
15340059	40X0.75	0.21	26.7	1.15	2.35	20.0 -0.5/+0.7	1.66	655	-
15340060	2X1	0.21	20.0	1.3	2.5	6.4 -0.3/+0.5	0.22	67	-
15340061	4X1	0.21	20.0	1.3	2.5	7.4 -0.3/+0.5	0.27	98	-
15340062	7X1	0.21	20.0	1.3	2.5	8.9 -0.3/+0.5	0.37	149	-
15340063	9X1	0.21	20.0	1.3	2.5	11.4 -0.4/+0.6	0.63	227	-
15340064	12X1	0.21	20.0	1.3	2.5	12.0 -0.4/+0.6	0.58	245	-
15340065	19X1	0.21	20.0	1.3	2.5	14.5 -0.4/+0.6	0.88	377	-
15340066	24X1	0.21	20.0	1.3	2.5	16.8 -0.5/+0.7	1.07	467	-

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15340067	32X1	0.21	20.0	1.3	2.5	18.9 -0.5/+0.7	1.42	623	-
15340068	37X1	0.21	20.0	1.3	2.5	19.9 -0.5/+0.7	1.56	702	-
15340069	40X1	0.21	20.0	1.3	2.5	21.2 -0.6/+0.8	22.53	784	-
15340000	2X1.5	0.26	13.7	1.6	3.0	7.4 -0.2+0.5	0.29	94	X
15340001	3X1.5	0.26	13.7	1.6	3.0	7.9 -0.1+0.6	0.32	114	X
15340025	3G1.5								
15340002	4X1.5	0.26	13.7	1.6	3.0	8.6 -0.1+0.6	0.37	140	X
15340026	4G1.5								
15340070	7X1.5	0.26	13.7	1.6	3.0	10.6 -0.4/+0.6	0.52	216	-
15340071	9X1.5	0.26	13.7	1.6	3.0	13.7 -0.4/+0.6	0.91	332	-
15340072	12X1.5	0.26	13.7	1.6	3.0	14.5 -0.4/+0.6	0.86	363	-
15340073	19X1.5	0.26	13.7	1.6	3.0	17.4 -0.5/+0.7	1.26	553	-
15340074	24X1.5	0.26	13.7	1.6	3.0	20.1 -0.6/+0.8	1.52	683	-
15340075	32X1.5	0.26	13.7	1.6	3.0	22.6 -0.6/+0.8	2.01	907	-
15340076	37X1.5	0.26	13.7	1.6	3.0	23.8 -0.6/+0.8	2.22	1027	-
15340003	2X2.5	0.26	8.21	2.0	3.4	8.2 -0.2+0.6	0.36	127	X
15340004	3X2.5	0.26	8.21	2.0	3.4	8.7 -0.2+0.6	0.38	157	X
15340027	3G2.5								
15340005	4X2.5	0.26	8.21	2.0	3.4	9.6 -0.2+0.6	0.45	195	X
15340028	4G2.5								
15340077	7X2.5	0.26	8.21	2.0	3.4	11.8 -0.4/+0.6	0.60	301	-
15340078	9X2.5	0.26	8.21	2.0	3.4	15.3 -0.4/+0.6	1.12	464	-
15340079	12X2.5	0.26	8.21	2.0	3.4	16.1 -0.5/+0.7	0.97	503	-
15340080	19X2.5	0.26	8.21	2.0	3.4	19.4 -0.5/+0.7	1.44	776	-
15340081	24X2.5	0.26	8.21	2.0	3.4	22.9 -0.6/+0.8	1.91	1000	-
15340006	2X4	0.31	5.09	2.7	4.1	9.6 -0.3+0.5	0.46	179	X
15340007	3X4	0.31	5.09	2.7	4.1	10.2 -0.4+0.6	0.49	223	X
15340008	4X4	0.31	5.09	2.7	4.1	11.4 -0.4+0.6	0.59	285	X
15340009	2X6	0.31	3.39	3.2	4.6	10.8 -0.4+0.6	0.58	244	X
15340010	3X6	0.31	3.39	3.2	4.6	11.5 -0.4+0.6	0.61	308	X
15340011	4X6	0.31	3.39	3.2	4.6	13.0 -0.4+0.6	0.73	393	X
15340012	2X10	0.41	1.95	4.2	5.6	13.2 -0.4+1.4	0.83	377	X
15340013	3X10	0.41	1.95	4.2	5.6	14.0 -0.4+1.4	0.86	480	X
15340014	4X10	0.41	1.95	4.2	5.6	15.4 -0.5+1.5	0.99	604	X
15340015	2X16	0.41	1.24	5.2	6.6	15.2 -0.3+1.5	1.10	552	X
15340016	3X16	0.41	1.24	5.2	6.6	16.2 -0.2+1.5	1.11	708	X
15340017	4X16	0.41	1.24	5.2	6.6	18.2 -0.2+1.7	1.36	916	X
15340018	2X25	0.41	0.795	6.5	8.3	19.0 -0.3+1.5	1.70	857	X
15340019	3X25	0.41	0.795	6.5	8.3	20.2 -0.2+1.7	1.72	1102	X
15340020	4X25	0.41	0.795	6.5	8.3	22.7 -0.1+1.9	2.07	1421	X
15340021	2X35	0.41	0.565	7.7	9.5	21.4 -0.2+2.2	2.11	1141	X
15340022	3X35	0.41	0.565	7.7	9.5	23.0 -0.0+2.2	2.16	1489	X
15340023	2X50	0.41	0.393	9.7	11.7	26.2 -0.8+2.4	3.00	1627	X
15340024	3X50	0.41	0.393	9.7	11.7	28.0 -0.8+2.4	2.97	2101	X

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