

15340000	DATA SHEET	
Valid from: 2023-11-15	ÖLFLEX® TRAIN 340 600V	

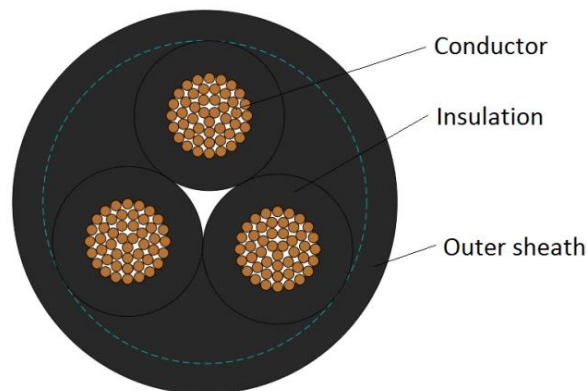
Application

Design ÖLFLEX® TRAIN 340 are halogen-free, highly flame retardant cables for use in railway vehicles. 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: connecting lamps, heating equipment, switchgear, terminal boxes and power supply

Design



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 at 20 °C

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	<p>Outer diameter \leq 12.0 mm for cautions bending (one bend at end of core): 3 x outer diameter fixed installation: 4 x outer diameter occasional flexing: 5 x outer diameter</p> <p>Outer diameter $>$ 12.0 mm for cautions bending (one bend at end of core): 4 x outer diameter fixed installation: 5 x outer diameter occasional flexing: 6 x outer diameter</p>
Temperature range	<p>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)</p> <p>- 50° acc. to GOST 33326-2015 and GOST 20.57.406-81 (method 203-1 und 205-1)</p>
Short circuit temperature	max. +200°C (5s)

Fire protection acc. to EN 50264-1 / EN 45545-2:

Classification	EN 45545-2: Hazard Level HL1, HL2, HL3
Flammability	<p>flame retardand acc. IEC 60332-1-2 resp. EN 60332-1-2 no flame propagation acc. to:</p> <p>\geq 12 mm: IEC 60332-3-24 resp. EN 60332-3-24 $>$ 6 mm und $<$ 12mm: IEC 60332-3-25 resp. EN 60332-3-25 \leq 6 mm: EN 50305, clause 9.1.2</p>
Smoke density	<p>acc. to EN 50264-1, light transmission: min. 70% acc. to IEC 61034-2 resp. EN 61034-2</p>
Halogen-free	<p>acc. to IEC 60754-1 resp. EN 60754-1 (chlorine and bromine) acc. to EN 60684-2 (fluorine)</p>
Corrosivity	<p>acc. to EN 50264-1, pH \geq 4.3 and conductivity \leq 10 μS/mm acc. to IEC 60754-2 resp. EN 60754-2</p>
Toxicity	<p>acc. to EN 50264-1 (\leq 3) acc. to EN 50305</p>

Fire protection acc. to NF (depending on dimension, see table):

Classification	<p>NF F 16-101: Internal Category A1, A2, B External Category A1, A2, B Category C for flame propagation Category F0 for smoke</p>
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 [kJ/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	636	49	-
15340041	4X0.5	0.21	40.1	0.95	2.15	6.6 -0.3/+0.5	810	69	-
15340042	7X0.5	0.21	40.1	0.95	2.15	7.9 -0.3/+0.5	1115	102	-
15340043	9X0.5	0.21	40.1	0.95	2.15	9.8 -0.3/+0.5	1747	151	-
15340044	12X0.5	0.21	40.1	0.95	2.15	10.5 -0.4/+0.6	1729	164	-
15340045	19X0.5	0.21	40.1	0.95	2.15	12.4 -0.4/+0.6	2441	242	-
15340046	24X0.5	0.21	40.1	0.95	2.15	14.7 -0.4/+0.6	3182	312	-
15340047	32X0.5	0.21	40.1	0.95	2.15	16.2 -0.5/+0.7	3971	399	-
15340048	37X0.5	0.21	40.1	0.95	2.15	17.5 -0.5/+0.7	4729	470	-
15340049	40X0.5	0.21	40.1	0.95	2.15	18.5 -0.5/+0.7	5325	520	-
15340050	2X0.75	0.21	26.7	1.15	2.35	6.1 -0.3/+0.5	723	59	-
15340051	4X0.75	0.21	26.7	1.15	2.35	7.0 -0.3/+0.5	894	83	-
15340052	7X0.75	0.21	26.7	1.15	2.35	8.5 -0.3/+0.5	1257	127	-
15340053	9X0.75	0.21	26.7	1.15	2.35	10.8 -0.4/+0.6	2093	193	-
15340054	12X0.75	0.21	26.7	1.15	2.35	11.4 -0.4/+0.6	1970	208	-
15340055	19X0.75	0.21	26.7	1.15	2.35	13.8 -0.4/+0.6	2968	319	-
15340056	24X0.75	0.21	26.7	1.15	2.35	15.9 -0.5/+0.7	3567	392	-
15340057	32X0.75	0.21	26.7	1.15	2.35	17.9 -0.5/+0.7	4724	521	-
15340058	37X0.75	0.21	26.7	1.15	2.35	18.9 -0.5/+0.7	5275	591	-
15340059	40X0.75	0.21	26.7	1.15	2.35	20.0 -0.5/+0.7	5962	655	-
15340060	2X1	0.21	20.0	1.3	2.5	6.4 -0.3/+0.5	791	67	-
15340061	4X1	0.21	20.0	1.3	2.5	7.4 -0.3/+0.5	982	98	-
15340062	7X1	0.21	20.0	1.3	2.5	8.9 -0.3/+0.5	1341	149	-
15340063	9X1	0.21	20.0	1.3	2.5	11.4 -0.4/+0.6	2278	227	-
15340064	12X1	0.21	20.0	1.3	2.5	12.0 -0.4/+0.6	2103	245	-
15340065	19X1	0.21	20.0	1.3	2.5	14.5 -0.4/+0.6	3153	377	-
15340066	24X1	0.21	20.0	1.3	2.5	16.8 -0.5/+0.7	3849	467	-

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15340067	32X1	0.21	20.0	1.3	2.5	18.9 -0.5/+0.7	5116	623	-
15340068	37X1	0.21	20.0	1.3	2.5	19.9 -0.5/+0.7	5618	702	-
15340069	40X1	0.21	20.0	1.3	2.5	21.2 -0.6/+0.8	6496	784	-
15340000	2X1.5	0.26	13.7	1.6	3.0	7.4 -0.2+0.5	1056	94	X
15340001	3X1.5	0.26	13.7	1.6	3.0	7.9 -0.1+0.6	1147	114	X
15340025	3G1.5						1335	140	X
15340002	4X1.5	0.26	13.7	1.6	3.0	8.6 -0.1+0.6	1335	140	X
15340026	4G1.5						1335	140	X
15340070	7X1.5	0.26	13.7	1.6	3.0	10.6 -0.4/+0.6	1871	216	-
15340071	9X1.5	0.26	13.7	1.6	3.0	13.7 -0.4/+0.6	3279	332	-
15340072	12X1.5	0.26	13.7	1.6	3.0	14.5 -0.4/+0.6	3087	363	-
15340073	19X1.5	0.26	13.7	1.6	3.0	17.4 -0.5/+0.7	4531	553	-
15340074	24X1.5	0.26	13.7	1.6	3.0	20.1 -0.6/+0.8	5467	683	-
15340075	32X1.5	0.26	13.7	1.6	3.0	22.6 -0.6/+0.8	7232	907	-
15340076	37X1.5	0.26	13.7	1.6	3.0	23.8 -0.6/+0.8	8003	1027	-
15340003	2X2.5	0.26	8.21	2.0	3.4	8.2 -0.2+0.6	1280	127	X
15340004	3X2.5	0.26	8.21	2.0	3.4	8.7 -0.2+0.6	1377	157	X
15340027	3G2.5						1377	157	X
15340005	4X2.5	0.26	8.21	2.0	3.4	9.6 -0.2+0.6	1604	195	X
15340028	4G2.5						1604	195	X
15340077	7X2.5	0.26	8.21	2.0	3.4	11.8 -0.4/+0.6	2161	301	-
15340078	9X2.5	0.26	8.21	2.0	3.4	15.3 -0.4/+0.6	4020	464	-
15340079	12X2.5	0.26	8.21	2.0	3.4	16.1 -0.5/+0.7	3491	503	-
15340080	19X2.5	0.26	8.21	2.0	3.4	19.4 -0.5/+0.7	5179	776	-
15340081	24X2.5	0.26	8.21	2.0	3.4	22.9 -0.6/+0.8	6867	1000	-
15340006	2X4	0.31	5.09	2.7	4.1	9.6 -0.3+0.5	1656	179	X
15340007	3X4	0.31	5.09	2.7	4.1	10.2 -0.4+0.6	1746	223	X
15340008	4X4	0.31	5.09	2.7	4.1	11.4 -0.4+0.6	2112	285	X
15340009	2X6	0.31	3.39	3.2	4.6	10.8 -0.4+0.6	2087	244	X
15340010	3X6	0.31	3.39	3.2	4.6	11.5 -0.4+0.6	2190	308	X
15340011	4X6	0.31	3.39	3.2	4.6	13.0 -0.4+0.6	2634	393	X
15340012	2X10	0.41	1.95	4.2	5.6	13.2 -0.4+1.4	2997	377	X
15340013	3X10	0.41	1.95	4.2	5.6	14.0 -0.4+1.4	3110	480	X
15340014	4X10	0.41	1.95	4.2	5.6	15.4 -0.5+1.5	3564	604	X
15340015	2X16	0.41	1.24	5.2	6.6	15.2 -0.3+1.5	3966	552	X
15340016	3X16	0.41	1.24	5.2	6.6	16.2 -0.2+1.5	4005	708	X
15340017	4X16	0.41	1.24	5.2	6.6	18.2 -0.2+1.7	4886	916	X
15340018	2X25	0.41	0.795	6.5	8.3	19.0 -0.3+1.5	6107	857	X
15340019	3X25	0.41	0.795	6.5	8.3	20.2 -0.2+1.7	6188	1102	X
15340020	4X25	0.41	0.795	6.5	8.3	22.7 -0.1+1.9	7468	1421	X
15340021	2X35	0.41	0.565	7.7	9.5	21.4 -0.2+2.2	7598	1141	X
15340022	3X35	0.41	0.565	7.7	9.5	23.0 -0.0+2.2	7792	1489	X
15340023	2X50	0.41	0.393	9.7	11.7	26.2 -0.8+2.4	10805	1627	X
15340024	3X50	0.41	0.393	9.7	11.7	28.0 -0.8+2.4	10708	2101	X

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