

ÖLFLEX® TRAIN 320 TW-E 300V

Multi-core cable according to EN 50306-4 1E type MM for high requirements in railway applications

ÖLFLEX® TRAIN 320 TW-E 300V - control cable according to EN 50306-4 1E type MM, 300/500V for rail vehicles/trains, EN 45545: HL1-HL3, NF F 16-101: C/F0

Info

Meets EN 50306-4 class E, type MM and EN 45545-2

High temperature resistance: -45 °C to +125 °C

Highly oil- and fuel-resistant

LAPP KABEL STUTTGART ÖLFLEX® TRAIN 320 TW-E 300V EN 50306-4 1E MM



CE



UV-resistant



Temperature-resistant



Space requirement



Oil-resistant



Mechanical resistance



Halogen-free



Good chemical resistance



Rail

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Product Management www.lappkabel.de

You can find the current technical data in the corresponding data sheet.

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ÖLFLEX® TRAIN 320 TW-E 300V



Flame-retardant



Cold-resistant

Benefits

- Reduced insulation wall thickness, therefore a space-saving installation
- Good chemical resistance
- Resistant to mechanical influences in harsh environmental conditions
- Extended temperature range
- Reduced flame spreading for protection against damage to persons and property in the event of a fire

Application range

- For use in railway vehicles and buses, for fixed installation and applications where limited movement is to be expected
- Suitable for control and monitoring circuits as well as locking circuits and internal wiring of equipment in trains and locomotives
- Can also be used in oily environments and areas with increased ambient temperature

Product features

Fire behaviour in accordance with EN/IEC:

- Halogen-free according to EN 60754-1
- No corrosive gases according to EN 60754-2
- No fluorine according to EN 60684-2
- No toxic gases according to EN 50305
- Low smoke density according to EN 61034-2
- Flame-retardant according to EN 60332-1-2
- No flame propagation according to EN 60332-3-24 / EN 60332-3-25 / EN 50305

Fire behaviour in accordance with NF:

- Toxicity of combustion gases according to NF X 70-100
- Low smoke density according to NF X 10-702
- No flame propagation according to NF C 32-070, cat. C1 and C2

Chemical properties:

- Oil-resistant according to EN 50306
- Fuel-resistant according to EN 50306
- Acid-resistant according to EN 50306
- Alkali-resistant according to EN 50306
- Ozone-resistant according to EN 50306

Norm references / approvals

EN 50306-4 class E, type MM
EN 45545-2 HL1, HL2, HL3
NF F 16-101 - classification: C / F0
(flame propagation / smoke)

Design

Tin-plated copper strand, 19- or 37-wire, SRC (Special Round Conductor)
Insulation: Electron beam cross-linked polymer compound according to EN 50306
Core colour: White with black numbers
Sheath: Electron beam cross-linked polymer-compound S2 according to EN 50306
Sheath colour: Black

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Technical Data

Classification:	ETIM 5.0 Class-ID: EC000104 ETIM 5.0 Class-Description: Control cable
Core identification code:	White with black numbers
Conductor design:	SRC (special round conductor) 19- or 37-wire according to EN 50306-1
Minimum bending radius:	Fixed installation: ≤ 12 mm: 4 x OD / 3 x OD* > 12 mm: 5 x OD / 4 x OD* * for careful bending, once at connecting terminal Occasional flexing: ≤ 12 mm: 5 x OD > 12 mm: 6 x OD (OD = outer diameter)
Nominal voltage:	U ₀ /U AC 300/500 V U _m AC 550 V V ₀ DC 410 V Fixed installation: U ₀ /U AC 0.6/1 kV U _m AC 1.2 kV V ₀ DC 0.9 kV
Test voltage:	3,5 kV AC; 8,4 kV DC
Protective conductor:	G = with GN-YE protective conductor X = without protective conductor
Temperature range:	Fixed installation: -45°C to +125°C (20,000 h) Occasional flexing: -35°C to +105°C Short circuit: +160°C (5s)

Note

Unless otherwise specified, the product values shown are nominal values. You can receive further values, such as tolerances, upon request if they are available and have been released for publication.

Copper price basis: EUR 150/100 kg; see catalogue appendix T17 for the application and definition of "Metal price basis" and "Metal index"

Packaging: Ring ≤ 30 kg or ≤ 250 m, otherwise drum

Please specify the preferred packaging (e.g. 1 x 500 m drum or 5 x 100 m rings)

Photographs are not to scale and do not represent detailed images of the respective products.

Prices are net prices without VAT and surcharges. Sale to business customers only.

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Article number	Number of cores and mm ² per conductor	Outer diameter [mm]	Copper index (kg/km)	Weight (kg/km)
15320000	4 X 0.5	6	19.2	60.95
15320001	7 X 0.5	6.8	33.6	84.17
15320002	13 X 0.5	8.8	62.4	142.1
15320003	19 X 0.5	9.6	91.2	180.85
15320004	37 X 0.5	12.9	177.6	332.58
15320005	4 X 0.75	6.5	28.8	76.4
15320006	7 X 0.75	7.4	50.4	108.28
15320007	13 X 0.75	9.7	93.6	185.94
15320008	19 X 0.75	10.6	136.8	240.31
15320009	37 X 0.75	13.8	266.4	427
15320011	4 X 1	6.8	38.4	90.13
15320012	7 X 1	7.8	67.2	130.21
15320013	13 X 1	10.3	124.8	226.12
15320014	19 X 1	11.3	182.4	295.72
15320015	37 X 1	14.8	355.2	531.56
15320016	4 X 1.5	7.9	57.6	124.75
15320017	7 X 1.5	9.3	100.8	189.27
15320018	13 X 1.5	12.3	187.2	325.41
15320019	19 X 1.5	13.6	273.6	433.31
15320020	37 X 1.5	18	532.8	782.39
15320021	2 X 2.5	8.2	49.2	126.39
15320022	3 X 2.5	8.6	73.79	151.93
15320023	4 X 2.5	9.4	98.39	188.61

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