ÖLFLEX® TRAIN 310 TW-P 300V

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

ÖLFLEX® TRAIN 310 TW-P 300V - control cable according to EN 50306-4 1P type MM, 300/500V for rail vehicles/trains, EN 45545: HL1-HL3, NF F 16-101: C/F0

Info
Meets EN 50306-4 class P, type MM and
EN 45545-2
High temperature resistance: -45°C up to +125°C
Highly oil- and fuel-resistant

UV-resistant

Temperature-resistant

Space requirement

Oil-resistant

Mechanical resistance

Halogen-free

Good chemical resistance

Rail

Last Update (28.06.2018)

Product Management www.lappkabel.de
You can find the current technical data in the corresponding data sheet.
PN 0456 / 02_03.16

ÖLFLEX® TRAIN 310 TW-P 300V


Flame-retardant


Cold-resistant

Benefits

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

Application range

For use in railway vehicles and buses, for fixed and protected installation and applications where limited movement may occur
Suitable for control and monitoring circuits as well as locking circuits and internal wiring of equipment in trains and locomotives
Also applicable within oily environments and areas with increased ambient temperature

Product features

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

Fire behaviour according to NF:
- Toxicity of gases acc. to NF X 70-100
- Low smoke density acc. to NF X 10-702
- No flame propagation acc. to NF C 32-070,
Cat. C1 and C2

Chemical properties:
- Oil resistant acc. to EN 50306
- Fuel resistant acc. to EN 50306
- Acid resistant acc. to EN 50306
- Alkali resistant acc. to EN 50306
- Ozone resistant acc. to EN 50306

Norm references / Approvals

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

ÖLFLEX® TRAIN 310 TW-P 300V

Product Make-up

Tinned-copper strand, 19 or 37 wires, SRC (Special Round Conductor)
Insulation: Electron beam cross-linked Polymer compound acc. to EN 50306
Colour of insulation: White with black numbers
Outer sheath: electron beam cross-linked polymer-compound S2 acc. to EN 50306
Outer sheath colour: Black

Technical Data

Classification ETIM 5:	ETIM 5.0 Class-ID: EC000104 ETIM 5.0 Class-Description: Control cable
Classification ETIM 6:	ETIM 6.0 Class-ID: EC000104 ETIM 6.0 Class-Description: Control cable
Core identification code:	White with black numbers
Conductor stranding:	SRC (special round conductor) 19 or 37 wires acc. 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
Test voltage:	2,0 kV AC; 4,8 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 specified otherwise, the shown product values are nominal values. Detailed values (e.g. tolerances) are available upon request.
Copper price basis: EUR 150/100 kg. Refer to catalogue appendix T17 for the definition and calculation of copper-related surcharges.
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 500 m drum or 5 x 100 m coils).
Photographs and graphics 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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PRODUCT INFORMATION

Article number	Number of cores and mm² per conductor	Outer diameter [mm]	Copper index (kg/km)	Weight (kg/km)
15310000	4 X 0.5	4.6	19.2	41.7
15310001	7 X 0.5	5.4	33.6	63.51
15310002	13 X 0.5	7.8	62.4	120.45
15310003	19 X 0.5	8.6	91.2	157.19
15310004	37 X 0.5	11.4	177.6	285.06
15310005	4 X 0.75	5.1	28.8	55.29
15310006	7 X 0.75	6.0	50.4	83.91
15310007	13 X 0.75	8.7	93.6	161.87
15310008	19 X 0.75	9.6	136.8	213.91
15310009	37 X 0.75	12.8	266.4	392.13
15310011	4 X 1.0	5.4	38.4	67.78
15310012	7 X 1.0	6.5	67.2	105.98
15310013	13 X 1.0	9.3	124.8	200.43
15310014	19 X 1.0	10.4	182.4	267.49
15310015	37 X 1.0	13.9	355.2	497.75
15310016	4 X 1.5	6.5	57.6	98.42
15310017	7 X 1.5	8.2	108	170.32
15310018	13 X 1.5	11.3	187.2	294.53
15310019	19 X 1.5	12.6	273.6	395.64
15310020	37 X 1.5	17.0	532.8	727.91
15310021	2 X 2.5	7.2	49.2	106.11
15310022	3 X 2.5	7.6	73.8	130.81
15310023	4 X 2.5	8.4	98.4	165.38