Wide application range due to multiple approvals
Cost-saving, easy installation due to omission of closed raceways (suitable for open wiring)

Flame-retardant

Cold-resistant

Mechanical resistance

Oil-resistant

Torsion-resistant

Info

Torsion resistant for drip loops
Wide application range (NFPA 70/NEC)/ compliance with NFPA 79 for industrial machinery
(UL) SUN. RES. approval in preparation

Application range

Industrial machinery; plant engineering
Machine tools compliant with UL MTW (Machine Tool Wiring)
TC-ER (Tray Cable Exposed Run) approval for open wiring between cable tray and industrial machines/plants acc. to NEC 336.10(7)
Wind turbines: USA Wind Turbine Tray Cable (WTTC)
Class 1, Div. 2 in accordance with NEC "National Electrical Code" Art. 336, 392, 501

Product Make-up

Fine-wire strand made of bare copper wires
Insulation: PVC with nylon sheath (PA skin)
Outer sheath made of special PVC compound, grey

Norm references / Approvals

Multi-standard cables have conductor strands with nominal sizes in mm² or AWG/kcmil. The master size is mentioned in the table below, while the equivalent size of the other system can be found in the Appendix T16 of this catalogue. For this related secondary size the cross-section of the conductor mostly works out to be greater than the specified nominal value.
Cable type certifications UL MTW, TC-ER, WTTC 1000 V, BUS DROP, c(UL) Type TC, CIC FT4, CSA AWM I/II A/B FT4, UL AWM style 20886

Product features

Flame-retardant according to CSA FT4
UL Vertical-Tray Flame Test
Oil-resistant according to UL OIL RES I & II
Water-resistant, UL Wet Approval 75 °C
Suitable for torsional applications which are typical for the loop in wind turbine generators (WTG)
Suitable for outdoor use thanks to technical UV and ozone resistance

Remark

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.
Please find our standard lengths at: www.lappkabel.de/en/cable-standardlengths
Packaging size: coil ≤ 30 kg or ≤ 250 m, otherwise drum
Please specify the preferred type of packaging (e.g. 1 x 610 m drum or 8 x 76 m coils).
Photographs are not to scale and do not represent detailed images of the respective products.
*OD = Outer diameter

Technical Data

Core identification code:	Black with white numbers
Classification:	ETIM 5.0 Class-ID: EC000104 ETIM 5.0 Class-Description: Control cable
Conductor stranding:	Fine-wire, bare copper strand
Torsion movement in WTG:	TW-0 & TW-2, refer to Appendix T0
Minimum bending radius:	Static/Occ. moved: 5/15xOD*
Nominal voltage:	UL/CSA: 600 V (TC, MTW, CIC), WTTC 1000 V UL/CSA: 1000 V (AWM) VDE U0 /U: 600/1000 V
Test voltage:	2000 V
Protective conductor:	G = with GN-YE protective conductor X = without protective conductor
Temperature range:	-40°C (static)/ -25°C (occ. moved) to +90°C (AWM: +105°C)

Part number	Number of cores and mm² per conductor	Outer diameter (mm)	Copper index (kg/km)	Weight (kg/km)
ÖLFLEX® CONTROL TM				
281803	3 G 1,0	7,4	28.8	82
281804	4 G 1,0	8.0	38.4	95
281805	5 G 1,0	8,6	48.0	112
281807	7 G 1,0	9,3	67.0	144
281812	12 G 1,0	12.0	115.0	247
281818	18 G 1,0	14,7	173.0	365
281825	25 G 1,0	16,7	240.0	464
281602	2 X 1,5	7,3	28.8	74
281603	3 G 1,5	8,1	43.0	100
281604	4 G 1,5	8,8	58.0	119
281605	5 G 1,5	9,5	72.0	141
281607	7 G 1,5	10,3	101.0	183
281609	9 G 1,5	11,9	129.6	247
281612	12 G 1,5	14,1	173.0	328
281618	18 G 1,5	16,4	259.0	403
281625	25 G 1,5	18,6	360.0	596
281403	3 G 2,5	8,9	72.0	125
281404	4 G 2,5	9,8	96.0	155
281405	5 G 2,5	10,7	120.0	185
281407	7 G 2,5	11,6	168.0	244
281203	3 G 4	10,6	115.0	165
281204	4 G 4	11,5	154.0	220
281205	5 G 4	12,6	192.0	269
281207	7 G 4	14,6	269.0	482
281004	4 G 6	14,5	231.0	382
281005	5 G 6	15,8	288.0	457
280804	4 G 10	17,7	384.0	615
280805	5 G 10	19,4	480.0	771
280604	4 G 16	22,5	615.0	864