



## ÖLFLEX® TORSION FRNC

Cold and oil-resistant cables for flexible applications under torsional load, halogen-free - 0.6/1 kV



### Info

- Torsion resistant, Cold flexible and Oil resistant for drip loops
- Halogen-free, Highly flame retardant, Low smoke density

## ÖLFLEX® TORSION D FRNC

Cold and oil-resistant cables for flexible applications under torsional load, halogen-free - 0.6/1 kV



### Info

- Torsion resistant, Cold flexible and Oil resistant for drip loops
- Halogen-free, Highly flame retardant, Low smoke density

### Application range

- Stationary or Flexible
- Torsion in Wind Turbines

### Product features

- Torsion resistant up to  $\pm 150^\circ/\text{m}$  for the drip loop of wind turbine generators
- Resistant to weather, abrasion, temperature, sunlight (ISO 4892-2) and ozone (EN 50396)
- Resistant to splashes of sea water as well as broad oil resistance, incl. EN 60811-404 and UL OIL RES I + II
- Fire behaviour:
  - Halogen-free (IEC 60754-1);
  - Low corrosivity (IEC 60754-2);
  - Low smoke density (IEC 61034-2);
  - Highly flame retardant (IEC 60332-3-24 and -25; IEC 60332-1-2)

### Norm references / Approvals

- UL AWM Style 21288

### Product Make-up

- Extra-fine wire conductor made of bare copper
- Core insulation: polyolefin compound
- Optional, overall shielding (D version) reducing electromagnetic interferences by tinned copper wire wrapping
- Outer sheath: special compound, halogen-free, black (RAL 9005)

### Technical data



#### Classification ETIM 5/6 ÖLFLEX® TORSION FRNC

ETIM 5.0/6.0 Class-ID: EC000057  
ETIM 5.0/6.0 Class-Description: Low voltage power cable

#### ÖLFLEX® TORSION D FRNC

ETIM 5.0/6.0 Class-ID: EC000104  
ETIM 5.0/6.0 Class-Description: Control cable



#### Core identification code

HD 308 coloured up to 5 cores, from 6 cores all black with white numbers (except PE)  
Paired signal cables: DIN 47100



#### Conductor stranding

IEC 60228, Cl. 6



#### Torsion movement in WTG

TW-0 & TW-2, refer to Appendix T0



#### Minimum bending radius

Flexible: 10x Outer diameter  
Stationary: 6x Outer diameter



#### Nominal voltage

IEC  $U_0/U=0.6/1\text{kV}$ ; UL 1kV



#### Test voltage

ÖLFLEX® TORSION FRNC

C/C: 4000 V

ÖLFLEX® TORSION D FRNC

C/C: 4000 V

C/S: 2000 V



#### Temperature range

-40°C to +90°C

UL: max. +80°C

Article number	Number of cores and mm <sup>2</sup> per conductor	Outer diameter [mm]	Copper index (kg/km)	Weight (kg/km)
<b>ÖLFLEX® TORSION FRNC</b>				
1150373	12 G 1.0	13.2	115.2	274
1150378	16 G 1.0	14.8	153.6	392
1150271	3 G 1.5	9.0	43.2	131
1150272	4 G 1.5	9.7	57.6	156
1150273	5 G 1.5	10.6	72	183
1150275	7 G 1.5	12.6	100.8	253
1150279	12 G 1.5	15.3	172.8	386
1150311	3 G 2.5	10.4		181
1150312	4 G 2.5	11.3	96	242
1150313	5 G 2.5	12.4	120	258
1150350	3 G 4	11.9	115.2	254
1150351	4 G 4	13.0	153.6	313
1150357	5 G 6	16.0	288	486
1150362	5 G 10	20.5	480	799
<b>ÖLFLEX® TORSION D FRNC - screened</b>				
1150111	4 x 2.0 x 0.5	11.9	71	205
1150115	12 x 2.0 x 0.5	18.3	188	518
1150121	4 x 2.0 x 0.75	12.7	90	232
1150125	12 x 2.0 x 0.75	19.8	258	603
1150221	18 G 0.75	15.2	180	402
1150228	50 G 0.75	24.9	470	1079

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](http://www.lappkabel.de/en/cable-standardlengths)

Packaging size: Drum

Details of the clamping force are available upon request, halogen-free.

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

#### Similar products

##### ÖLFLEX® TORSION FRNC

- H07RN-F, enhanced version refer to page 88