

|                           |                                |                                                                                    |
|---------------------------|--------------------------------|------------------------------------------------------------------------------------|
| 0023300                   | <b>DATA SHEET</b>              |  |
| valid from:<br>14.05.2024 | <b>ÖLFLEX® PETRO FD 865 CP</b> |                                                                                    |

## Application

ÖLFLEX® PETRO FD 865 CP cables are oil-resistant control cables with an outer sheath of special polymer compound for high flexible use and fixed installation under medium mechanical load conditions. They are also suitable for use in dry, damp or wet areas. They are suitable for outdoor use if the indicated temperature range is observed.

ÖLFLEX® PETRO FD 865 CP cables are resistant to oil and drilling fluids according to NEK TS 606:2022 (Oil & MUD) as well as IEC 60092-360 and at room temperature widely resistant to acids and alkalis.

The outer sheath withstands high mechanical stresses, in particular abrasion and dragging. It is also cut proof and resists microbes and hydrolysis. They are especially suitable for increased requirements (Extended Line) in power chains and in permanently moved machine parts. They are suitable for linear, automated movements. The maximum tensile load is 15 N/mm<sup>2</sup> of conductor cross-section during installation and operation. Compulsory guidance is not permitted.

All materials used are halogen-free. The screening braid protects against interference from electrical fields.

Application range: Power chains or moving machine parts, on- and offshore applications e.g. offshore drilling platform, drillship; machine tools and transfer lines, mechanical engineering, construction machinery, assembly lines, production lines, in all kinds of machines.

## Design

|                          |                                                                                                               |
|--------------------------|---------------------------------------------------------------------------------------------------------------|
| Design                   | based on EN 50525-2-21 and EN 50525-2-51                                                                      |
| Certification            | DNV (Certificate-No. TAE000031E)                                                                              |
| Conductor                | extra fine wire strands of bare copper acc. to IEC 60228 resp. EN 60228, Class 6                              |
| Insulation               | TPE (Thermoplastic Elastomer)                                                                                 |
| Core identification code | acc. to VDE 0293-1, with or without GN/YE ground conductor<br>black cores with white numbers acc. to EN 50334 |
| Stranding                | cores are stranded in layers                                                                                  |
| Wrapping                 | non-woven wrapping                                                                                            |
| Inner sheath             | TPE (Thermoplastic Elastomer)                                                                                 |
| Screen                   | braid of tinned copper wires, coverage = 85% (nominal value)                                                  |
| Outer sheath             | Special polymer compound<br>colour: Black, similar RAL 9005                                                   |

## Electrical properties at 20 °C

|                             |                      |             |
|-----------------------------|----------------------|-------------|
| Specific volume resistivity | > 20 G Ω x cm        |             |
| Nominal voltage             | U <sub>0</sub> / U : | 300 / 500 V |
| Test voltage                | core / core:         | 3000 V AC   |
|                             | core / screen:       | 3000 V AC   |

## Mechanical and thermal properties

|                                                     |                                                                                                                                                                                                |
|-----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Minimum bending radius                              | flexing: up from 7.5 x outer diameter<br>fixed installation: 4 x outer diameter                                                                                                                |
| Temperature range                                   | flexing: -50 °C up to +80 °C max. conductor temp.<br>fixed installation: -60 °C up to +80 °C max. conductor temp.                                                                              |
| Bending cycles and power chain operation parameters | See Selection Table A2-1 in the appendix of our online catalogue<br>For use in power chains: Please comply with assembly guideline Appendix T3                                                 |
| Flammability                                        | flame retardant acc. to IEC 60332-1-2 resp. EN 60332-1-2                                                                                                                                       |
| Halogen free                                        | acc. to EN 60754-1                                                                                                                                                                             |
| UV resistance                                       | Acc. to EN 50525-1 cables with black sheath are suitable for permanent outdoor use.<br>acc. to EN 50618<br>acc. to EN 50620<br>acc. to EN ISO 4892-2-2013, method A (change of colour allowed) |
| Oil resistance                                      | acc. to EN 50363-10-2                                                                                                                                                                          |
| MUD resistance                                      | acc. to NEK TS 606: 2022 and IEC 60092-360                                                                                                                                                     |
| Water-resistance                                    | Salt water resistance acc. to UL 1309                                                                                                                                                          |

|              |                                       |
|--------------|---------------------------------------|
| <b>Tests</b> | acc. to IEC 60811, EN 60811, EN 50395 |
|--------------|---------------------------------------|

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**General requirements**

These cables are conform to the EU-Directive 2014/35/EU (Low Voltage Directive).  
 These cables (see [www.lappkabel.com/cpr](http://www.lappkabel.com/cpr)) are classified in accordance with the  
 EU-Regulation no. 305/2011 (CPR).

**Environmental information**

These cables meet the substance-specific requirements of the EU Directive 2011/65/EU (RoHS).

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ÖLFLEX® PETRO FD 865 CP

| Artikelnr | Namn                            | Antal ledare | Inklusive skyddsjord | Nominell ledararea (metrisk) | Nominell ytterdiameter | Kopparindex | Vikt      |
|-----------|---------------------------------|--------------|----------------------|------------------------------|------------------------|-------------|-----------|
| 0023300   | ÖLFLEX® PETRO FD 865 CP 2X0,5   | 2            | Nej                  | 0,5 mm²                      | 6,7 mm                 | 32 kg/km    | 60 kg/km  |
| 0023301   | ÖLFLEX® PETRO FD 865 CP 3G0,5   | 3            | Ja                   | 0,5 mm²                      | 7,1 mm                 | 40 kg/km    | 70 kg/km  |
| 0023302   | ÖLFLEX® PETRO FD 865 CP 4G0,5   | 4            | Ja                   | 0,5 mm²                      | 7,6 mm                 | 47 kg/km    | 84 kg/km  |
| 0023303   | ÖLFLEX® PETRO FD 865 CP 5G0,5   | 5            | Ja                   | 0,5 mm²                      | 8,2 mm                 | 53 kg/km    | 95 kg/km  |
| 0023305   | ÖLFLEX® PETRO FD 865 CP 12G0,5  | 12           | Ja                   | 0,5 mm²                      | 10,9 mm                | 97 kg/km    | 190 kg/km |
| 0023306   | ÖLFLEX® PETRO FD 865 CP 18G0,5  | 18           | Ja                   | 0,5 mm²                      | 12,9 mm                | 131 kg/km   | 245 kg/km |
| 0023307   | ÖLFLEX® PETRO FD 865 CP 20G0,5  | 20           | Ja                   | 0,5 mm²                      | 13,5 mm                | 156 kg/km   | 281 kg/km |
| 0023308   | ÖLFLEX® PETRO FD 865 CP 25G0,5  | 25           | Ja                   | 0,5 mm²                      | 15,6 mm                | 190 kg/km   | 367 kg/km |
| 0023309   | ÖLFLEX® PETRO FD 865 CP 30G0,5  | 30           | Ja                   | 0,5 mm²                      | 15,8 mm                | 222 kg/km   | 408 kg/km |
| 0023310   | ÖLFLEX® PETRO FD 865 CP 36G0,5  | 36           | Ja                   | 0,5 mm²                      | 16,9 mm                | 251 kg/km   | 459 kg/km |
| 0023311   | ÖLFLEX® PETRO FD 865 CP 2X0,75  | 2            | Nej                  | 0,75 mm²                     | 7,2 mm                 | 40 kg/km    | 68 kg/km  |
| 0023312   | ÖLFLEX® PETRO FD 865 CP 3G0,75  | 3            | Ja                   | 0,75 mm²                     | 7,6 mm                 | 47 kg/km    | 82 kg/km  |
| 0023313   | ÖLFLEX® PETRO FD 865 CP 4G0,75  | 4            | Ja                   | 0,75 mm²                     | 8,3 mm                 | 58 kg/km    | 96 kg/km  |
| 0023314   | ÖLFLEX® PETRO FD 865 CP 5G0,75  | 5            | Ja                   | 0,75 mm²                     | 8,9 mm                 | 65 kg/km    | 113 kg/km |
| 0023315   | ÖLFLEX® PETRO FD 865 CP 7G0,75  | 7            | Ja                   | 0,75 mm²                     | 10,6 mm                | 85 kg/km    | 145 kg/km |
| 0023316   | ÖLFLEX® PETRO FD 865 CP 12G0,75 | 12           | Ja                   | 0,75 mm²                     | 12,1 mm                | 127 kg/km   | 215 kg/km |
| 0023317   | ÖLFLEX® PETRO FD 865 CP 18G0,75 | 18           | Ja                   | 0,75 mm²                     | 14,6 mm                | 198 kg/km   | 318 kg/km |
| 0023318   | ÖLFLEX® PETRO FD 865 CP 20G0,75 | 20           | Ja                   | 0,75 mm²                     | 15,5 mm                | 213 kg/km   | 354 kg/km |
| 0023319   | ÖLFLEX® PETRO FD 865 CP 25G0,75 | 25           | Ja                   | 0,75 mm²                     | 17,7 mm                | 259 kg/km   | 459 kg/km |
| 0023320   | ÖLFLEX® PETRO FD 865 CP 30G0,75 | 30           | Ja                   | 0,75 mm²                     | 17,7 mm                | 296 kg/km   | 480 kg/km |
| 0023321   | ÖLFLEX® PETRO FD 865 CP 36G0,75 | 36           | Ja                   | 0,75 mm²                     | 19,5 mm                | 348 kg/km   | 605 kg/km |
| 0023322   | ÖLFLEX® PETRO FD 865 CP 2X1     | 2            | Nej                  | 1 mm²                        | 7,6 mm                 | 45 kg/km    | 83 kg/km  |
| 0023323   | ÖLFLEX® PETRO FD 865 CP 3G1     | 3            | Ja                   | 1 mm²                        | 8,1 mm                 | 55 kg/km    | 94 kg/km  |
| 0023324   | ÖLFLEX® PETRO FD 865 CP 4G1     | 4            | Ja                   | 1 mm²                        | 8,8 mm                 | 68 kg/km    | 114 kg/km |
| 0023325   | ÖLFLEX® PETRO FD 865 CP 5G1     | 5            | Ja                   | 1 mm²                        | 9,6 mm                 | 81 kg/km    | 135 kg/km |
| 0023326   | ÖLFLEX® PETRO FD 865 CP 7G1     | 7            | Ja                   | 1 mm²                        | 11,3 mm                | 106 kg/km   | 177 kg/km |
| 0023327   | ÖLFLEX® PETRO FD 865 CP 12G1    | 12           | Ja                   | 1 mm²                        | 13,2 mm                | 175 kg/km   | 274 kg/km |
| 0023328   | ÖLFLEX® PETRO FD 865 CP 18G1    | 18           | Ja                   | 1 mm²                        | 15,9 mm                | 242 kg/km   | 394 kg/km |
| 0023329   | ÖLFLEX® PETRO FD 865 CP 20G1    | 20           | Ja                   | 1 mm²                        | 16,6 mm                | 269 kg/km   | 427 kg/km |
| 0023330   | ÖLFLEX® PETRO FD 865 CP 25G1    | 25           | Ja                   | 1 mm²                        | 19,2 mm                | 329 kg/km   | 575 kg/km |

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|-----------|--------------------------------|--------------|----------------------|------------------------------|------------------------|-------------|------------|
| 0023331   | ÖLFLEX® PETRO FD 865 CP 30G1   | 30           | Ja                   | 1 mm <sup>2</sup>            | 19,6 mm                | 377 kg/km   | 635 kg/km  |
| 0023332   | ÖLFLEX® PETRO FD 865 CP 36G1   | 36           | Ja                   | 1 mm <sup>2</sup>            | 21,2 mm                | 467 kg/km   | 758 kg/km  |
| 0023333   | ÖLFLEX® PETRO FD 865 CP 2X1,5  | 2            | Nej                  | 1,5 mm <sup>2</sup>          | 8,3 mm                 | 58 kg/km    | 95 kg/km   |
| 0023334   | ÖLFLEX® PETRO FD 865 CP 3G1,5  | 3            | Ja                   | 1,5 mm <sup>2</sup>          | 8,9 mm                 | 76 kg/km    | 118 kg/km  |
| 0023335   | ÖLFLEX® PETRO FD 865 CP 4G1,5  | 4            | Ja                   | 1,5 mm <sup>2</sup>          | 9,8 mm                 | 91 kg/km    | 147 kg/km  |
| 0023336   | ÖLFLEX® PETRO FD 865 CP 5G1,5  | 5            | Ja                   | 1,5 mm <sup>2</sup>          | 10,8 mm                | 111 kg/km   | 176 kg/km  |
| 0023337   | ÖLFLEX® PETRO FD 865 CP 7G1,5  | 7            | Ja                   | 1,5 mm <sup>2</sup>          | 12,5 mm                | 145 kg/km   | 233 kg/km  |
| 0023338   | ÖLFLEX® PETRO FD 865 CP 12G1,5 | 12           | Ja                   | 1,5 mm <sup>2</sup>          | 14,9 mm                | 242 kg/km   | 367 kg/km  |
| 0023339   | ÖLFLEX® PETRO FD 865 CP 18G1,5 | 18           | Ja                   | 1,5 mm <sup>2</sup>          | 17,4 mm                | 346 kg/km   | 509 kg/km  |
| 0023340   | ÖLFLEX® PETRO FD 865 CP 20G1,5 | 20           | Ja                   | 1,5 mm <sup>2</sup>          | 18,3 mm                | 377 kg/km   | 562 kg/km  |
| 0023341   | ÖLFLEX® PETRO FD 865 CP 25G1,5 | 25           | Ja                   | 1,5 mm <sup>2</sup>          | 21,4 mm                | 486 kg/km   | 811 kg/km  |
| 0023342   | ÖLFLEX® PETRO FD 865 CP 30G1,5 | 30           | Ja                   | 1,5 mm <sup>2</sup>          | 21,4 mm                | 568 kg/km   | 568 kg/km  |
| 0023343   | ÖLFLEX® PETRO FD 865 CP 36G1,5 | 36           | Ja                   | 1,5 mm <sup>2</sup>          | 23,4 mm                | 655 kg/km   | 1066 kg/km |
| 0023344   | ÖLFLEX® PETRO FD 865 CP 2X2,5  | 2            | Nej                  | 2,5 mm <sup>2</sup>          | 9,8 mm                 | 73 kg/km    | 129 kg/km  |
| 0023345   | ÖLFLEX® PETRO FD 865 CP 3G2,5  | 3            | Ja                   | 2,5 mm <sup>2</sup>          | 10,7 mm                | 110 kg/km   | 168 kg/km  |
| 0023346   | ÖLFLEX® PETRO FD 865 CP 4G2,5  | 4            | Ja                   | 2,5 mm <sup>2</sup>          | 11,7 mm                | 136 kg/km   | 205 kg/km  |
| 0023347   | ÖLFLEX® PETRO FD 865 CP 5G2,5  | 5            | Ja                   | 2,5 mm <sup>2</sup>          | 12,8 mm                | 180 kg/km   | 293 kg/km  |
| 0023348   | ÖLFLEX® PETRO FD 865 CP 7G2,5  | 7            | Ja                   | 2,5 mm <sup>2</sup>          | 15,6 mm                | 246 kg/km   | 418 kg/km  |
| 0023349   | ÖLFLEX® PETRO FD 865 CP 12G2,5 | 12           | Ja                   | 2,5 mm <sup>2</sup>          | 18 mm                  | 377 kg/km   | 629 kg/km  |
| 0023350   | ÖLFLEX® PETRO FD 865 CP 18G2,5 | 18           | Ja                   | 2,5 mm <sup>2</sup>          | 21,5 mm                | 569 kg/km   | 912 kg/km  |
| 0023351   | ÖLFLEX® PETRO FD 865 CP 20G2,5 | 20           | Ja                   | 2,5 mm <sup>2</sup>          | 22,7 mm                | 582 kg/km   | 850 kg/km  |
| 0023352   | ÖLFLEX® PETRO FD 865 CP 25G2,5 | 25           | Ja                   | 2,5 mm <sup>2</sup>          | 26,5 mm                | 765 kg/km   | 1266 kg/km |
| 0023353   | ÖLFLEX® PETRO FD 865 CP 4G4    | 4            | Ja                   | 4 mm <sup>2</sup>            | 13,9 mm                | 205 kg/km   | 311 kg/km  |
| 0023354   | ÖLFLEX® PETRO FD 865 CP 5G4    | 5            | Ja                   | 4 mm <sup>2</sup>            | 15,4 mm                | 250 kg/km   | 381 kg/km  |
| 0023355   | ÖLFLEX® PETRO FD 865 CP 4G6    | 4            | Ja                   | 6 mm <sup>2</sup>            | 16,2 mm                | 289 kg/km   | 423 kg/km  |
| 0023356   | ÖLFLEX® PETRO FD 865 CP 5G6    | 5            | Ja                   | 6 mm <sup>2</sup>            | 17,8 mm                | 354 kg/km   | 512 kg/km  |
| 0023357   | ÖLFLEX® PETRO FD 865 CP 4G10   | 4            | Ja                   | 10 mm <sup>2</sup>           | 20,4 mm                | 475 kg/km   | 672 kg/km  |
| 0023358   | ÖLFLEX® PETRO FD 865 CP 5G10   | 5            | Ja                   | 10 mm <sup>2</sup>           | 22,3 mm                | 582 kg/km   | 814 kg/km  |