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| <b>1 123200</b>                   | <b>DATA SHEET</b>             |  |
| <b>valid from:<br/>15.01.2024</b> | <b>ÖLFLEX® CLASSIC 135 CH</b> |                                                                                     |

## Application

ÖLFLEX® CLASSIC 135 CH are screened halogen free, highly flame retardant control cables designed for the European and North American market, for occasional flexible use and fixed installation subject to normal mechanical load conditions.

They are also suitable for use in dry or damp areas. Considering the temperature range, a temporary outdoor use is possible. They are suitable for occasional, non-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.

The screening braid protects against interference from electrical fields.

Application range: Public buildings, airports, railway stations, plant engineering and construction, air conditioning systems and particularly where human and animal life as well as valuable property are exposed to high risk of fire hazards. In the event of a fire minimal toxic and no corrosive gases occur.

USE according to UL: FRPE sheathed cable for internal wiring of appliances

## Design

|                          |                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Design                   | acc. to UL AWM Style 10701 and 21217 and UL 758, and based on EN 50525-3-11                                                                                                                                                                                                                                                                                                                                         |
| Certification            | UL AWM Style 21217* (File No. E63634), UL 758<br>DNV Certificate No. TAE00002RK<br>VDE certified: Supply cable with improved characteristics in the case of fire<br>EN 13501-6 and EN 50575<br>Classification of fire behaviour<br>(article/dimension range see <a href="http://www.lappkabel.com/cpr">www.lappkabel.com/cpr</a> )<br>*Style change: UL Style 21089 replaced by Style 21217 (approx. February 2018) |
| Conductor                | fine wire strands of bare copper, acc. to IEC 60228 resp. EN 60228, Class 5                                                                                                                                                                                                                                                                                                                                         |
| Insulation               | halogen free compound TI6,<br>acc. to EN 50363-7, with increased requirements                                                                                                                                                                                                                                                                                                                                       |
| Core identification code | acc. to VDE 0293-1, with or without GN/YE ground conductor<br>black cores with white numbers acc. to DIN EN 50334                                                                                                                                                                                                                                                                                                   |
| Stranding                | cores are stranded in layers                                                                                                                                                                                                                                                                                                                                                                                        |
| Wrapping                 | plastic foil                                                                                                                                                                                                                                                                                                                                                                                                        |
| Screen                   | braid of tinned copper, coverage = 85% (nominal value)                                                                                                                                                                                                                                                                                                                                                              |
| Outer sheath             | halogen free compound TM7 acc. to EN 50363-8<br>Colour: Silver grey, similar RAL 7001                                                                                                                                                                                                                                                                                                                               |

## Electrical properties at 20 °C

|                    |                                                    |
|--------------------|----------------------------------------------------|
| Transfer impedance | at 30 MHz max. 250 Ω/km acc. to EN 50395           |
| Nominal voltage    | EN U <sub>0</sub> /U: 300/500 V<br>UL: 600 V       |
| Test voltage       | core / core: 4000 V AC<br>core / screen: 2000 V AC |

## Mechanical and thermal properties

|                        |                                                                                                                                                                                                                                                                                  |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Minimum bending radius | occasional flexing: 20 x outer diameter<br>fixed installation: 6 x outer diameter                                                                                                                                                                                                |
| Temperature range      | occasional flexing (EN): -25 °C up to +70 °C max. conductor temp.<br>occasional flexing (UL): up to +75 °C max. conductor temp.<br>fixed installation (EN): -40 °C up to +80 °C max. conductor temp.<br>fixed installation (UL): up to +75 °C max. conductor temp.               |
| Flammability           | flame retardant acc. to IEC 60332-1-2 resp. EN 60332-1-2<br>UL: Horizontal flame test acc. to UL 1581 §1090<br>no flame-propagation<br>acc. to IEC 60332-3-22 resp. EN 60332-3-22<br>acc. to IEC 60332-3-24 resp. EN 60332-3-24 or<br>acc. to IEC 60332-3-25 resp. EN 60332-3-25 |
| Halogen free           | acc. to IEC 60754-1 resp. EN 60754-1                                                                                                                                                                                                                                             |
| Corrosivity of gases   | acc. to IEC 60754-2 resp. EN 60754-2                                                                                                                                                                                                                                             |

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|                  |                                                                 |
|------------------|-----------------------------------------------------------------|
| Smoke density    | acc. to IEC 61034-2 resp. EN 61034-2                            |
| Toxicity         | acc. to EN 50306-1 ( $\leq 6$ )                                 |
| UV resistance    | acc. to EN 50620                                                |
|                  | acc. to EN ISO 4892-2-2013, method A (change of colour allowed) |
| Ozone resistance | acc. to EN 50396 resp., method B                                |

|                             |                                                                                  |
|-----------------------------|----------------------------------------------------------------------------------|
| <b>Tests</b>                | acc. to IEC 60811 resp. EN 60811, EN 50395, EN 50396, UL 1581                    |
| <b>General requirements</b> | These cables are conform to the EU-Directive 2014/35/EU (Low Voltage Directive). |

|                                  |                                                                                                                                                                        |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                  | A part of these cables (see <a href="http://www.lappkabel.com/cpr">www.lappkabel.com/cpr</a> ) are classified in accordance with the EU-Regulation no. 305/2011 (CPR). |
| <b>Environmental information</b> | These cables meet the substance-specific requirements of the EU Directive 2011/65/EU (RoHS).                                                                           |

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