

|                           |                                |                                                                                     |
|---------------------------|--------------------------------|-------------------------------------------------------------------------------------|
| 0037000                   | <b>DATA SHEET</b>              |  |
| valid from:<br>30.03.2026 | <b>ÖLFLEX® SERVO 9YSLCY-JB</b> |                                                                                     |

## Application

ÖLFLEX® SERVO 9YSLCY-JB and ÖLFLEX® SERVO 9YSLCY-JB BK are flexible motor supply cables having special EMC performance due to double shield, with low capacitance design and PVC sheath. The cables feature UL-AWM approval for USA and Canada. Construction 9YSLCY-JB has a special concentric conductor array design, where protective conductor is split into 3 individual cores with reduced overall cross-section. This design avoids that from all cable-relevant parts high frequency discharge currents can pass lubrication film of motor bearings. This effect may damage motor bearings, especially if switching frequency of the frequency converter is very high and/or long cable lengths are required. The earthing concept for the earth-symmetrical version with the protective conductor splitted in thirds is composed of the defined cross-sections of the protective conductors and the screening braid. This design also improves EMC noise situation of the whole drive system. Contrary to usage of PVC insulated cables, PP insulated cables show significant reduction of useless reactive power always needed for charging and discharging the cable during operating of the frequency converter. The cables are designed for use in dry, damp and wet conditions. Construction 9YSLCY-JB BK is UV-resistant and suitable for outdoor use. Approval terms of USA or Canada don't include outdoor use. At room temperature they are widely resistant to acids, alkali-resistant and resistant to certain oils. They are suitable for free, non-continuously recurring movements without tensile load or compulsory guidance and also for fixed installation. Furthermore the cables are flame retardant and self-extinguishing.

Application range:

Connecting cable between frequency converter and three-phase motors, with small and large sizes, in the range of paper industry, chemical industry, heavy industry.

## Design

|                          |                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Design                   | acc. to UL AWM Style 2570, UL 758                                                                                                                                                                                                                                                                                                                                 |
| Certification            |  AWM I/II A/B (File No. E63634)<br>Classification of fire behaviour<br>acc. to EN 13501-6 and EN 50575<br>(article/dimension range see <a href="http://www.lappkabel.com/cpr">www.lappkabel.com/cpr</a> )                                                                        |
| Conductor                | fine wire strands of bare copper, acc. to IEC 60228 resp. EN IEC 60228, class 5                                                                                                                                                                                                                                                                                   |
| Insulation               | Polypropylen (PP) Type 9Y, low capacity<br>acc. to EN 50290-2-25 type 2, 90°C and<br>UL AWM Style 10492, 80°C, 1000 V                                                                                                                                                                                                                                             |
| Core identification code | acc. to HD 308 S2 resp. VDE 0293-308                                                                                                                                                                                                                                                                                                                              |
| Cable assembly           | 9YSLCY-JB:<br>4 cores twisted together in one layer<br><br>9YSLCY-JB BK:<br>3+3 cores twisted concentrically, protective conductor divided into three, positioned in the gusset                                                                                                                                                                                   |
| Screen                   | double screening with aluminium-coated plastic foil (metal-side outwards) and braid of tinned copper wires, braid coverage min. 70% (nominal value)                                                                                                                                                                                                               |
| Outer sheath             | 9YSLCY-JB:<br>transparent PVC sheath, 80°C, TM2 acc. to EN 50363-4-1<br>flame retardant and self-extinguishing acc. to IEC 60332-1-2 resp. EN 60332-1-2<br><br>9YSLCY-JB BK:<br>black PVC sheath, 90°C, TM 3 acc. to EN 50363-4-1<br>flame retardant and self-extinguishing acc. to IEC 60332-1-2 resp. EN 60332-1-2,<br>UV-resistant, cold flexible, outdoor use |

## Electrical properties at 20 °C

|                             |                                                     |
|-----------------------------|-----------------------------------------------------|
| Specific volume resistivity | > 20 G $\Omega$ x cm                                |
| Transfer impedance          | max. 250 $\Omega$ /km (at 30 MHz)                   |
| Nominal voltage             | IEC U <sub>0</sub> /U: 600/1000 V<br>UL/CSA: 1000 V |
| Test voltage                | core/core: 4000 V AC<br>core/screen: 4000 V AC      |

|                      |                       |             |
|----------------------|-----------------------|-------------|
| Creator: SESC / PDC  | Document: DB0037000EN | Page 1 of 3 |
| Released: LABU / PDC | Version: 10           |             |

|                           |                                |                                                                                     |
|---------------------------|--------------------------------|-------------------------------------------------------------------------------------|
| 0037000                   | <b>DATA SHEET</b>              |  |
| valid from:<br>30.03.2026 | <b>ÖLFLEX® SERVO 9YSLCY-JB</b> |                                                                                     |

## Mechanical and thermal properties

|                        |                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Minimum bending radius | occasional flexing: 15 x outer diameter<br>fixed installation: 4 x outer diameter                                                                                                                                                                                                                                                                                   |
| Temperature range      | Part No. 0037000 up to 0037014 ÖLFLEX SERVO 9YSLCY-JB, TRANSPARENT<br><br>occasional flexing (VDE/IEC): -5 °C up to +80 °C max. conductor temp.<br>occasional flexing (UL/CSA): -5 °C up to +80 °C max. conductor temp.<br>fixed installation (VDE/IEC): -40 °C up to +80 °C max. conductor temp.<br>fixed installation (UL/CSA): up to +80 °C max. conductor temp. |

Part No. 0036998, 0037015 up to 0037028 ÖLFLEX SERVO 9YSLCY-JB, BLACK

|               |                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Flammability  | occasional flexing (VDE/IEC): -5 °C up to +90 °C max. conductor temp.<br>occasional flexing (UL/CSA): -5 °C up to +80 °C max. conductor temp.<br>fixed installation (VDE/IEC): -40 °C up to +90 °C max. conductor temp.<br>fixed installation (UL/CSA): up to +80 °C max. conductor temp.<br><br>flame retardant acc. to IEC 60332-1-2 resp. EN 60332-1-2<br>UL: Vertical flame test VW-1, Cable flame test<br>CSA: FT1 |
| UV resistance | 9YSLCY-JB BK:<br>EN 50525-1,<br>cables with black sheath are suitable for a permanent outdoor use                                                                                                                                                                                                                                                                                                                       |

|                             |                                                                                     |
|-----------------------------|-------------------------------------------------------------------------------------|
| <b>Tests</b>                | acc. to IEC 60811 resp. EN 60811, VDE 0472, EN 50395, EN 50396                      |
| <b>General requirements</b> | These cables are conform to the EU-Directive 2014/35 EU<br>(Low Voltage Directive). |

A part of these cables (see [www.lappkabel.com/cpr](http://www.lappkabel.com/cpr)) 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). |
|----------------------------------|----------------------------------------------------------------------------------------------|

|                      |                       |             |
|----------------------|-----------------------|-------------|
| Creator: SESC / PDC  | Document: DB0037000EN | Page 2 of 3 |
| Released: LABU / PDC | Version: 10           |             |

|                           |                         |                                                                                     |
|---------------------------|-------------------------|-------------------------------------------------------------------------------------|
| 0037000                   | DATA SHEET              |  |
| valid from:<br>30.03.2026 | ÖLFLEX® SERVO 9YSLCY-JB |                                                                                     |

| Part number | Dimension    | Conductor cross section meets minimum | Cond. Spec. No of wires (nominal) x wire diameter (max. value) | EMC Copper braid wire diameter | Copper braid: Nominal cross section | Outer diameter (nominal) | Current ratings at 30°C | Inductance per core at 800 Hz | Capacitance core/core at 800 Hz | Capacitance core/screen at 800 Hz | Transfer impedance |           |           |
|-------------|--------------|---------------------------------------|----------------------------------------------------------------|--------------------------------|-------------------------------------|--------------------------|-------------------------|-------------------------------|---------------------------------|-----------------------------------|--------------------|-----------|-----------|
|             |              |                                       |                                                                |                                |                                     |                          |                         |                               |                                 |                                   | at 1 MHz           | at 10 MHz | at 30 MHz |
|             | [mm²]        | [AWG/kcmil]                           | [x mm]                                                         | [mm]                           | [mm²]                               | [mm]                     | [A]                     | [µH/km]                       | [nF/km]                         | [nF/km]                           | [Ω/km]             | [Ω/km]    | [Ω/km]    |
| 0037000     | 4G1,5        | 16AWG                                 | 29x0,25                                                        | 0,2                            | 2,5                                 | 10,5                     | 18                      | 366                           | 70                              | 110                               | 18                 | 90        | 230       |
| 0037001     | 4G2,5        | 14AWG                                 | 50x0,25                                                        | 0,2                            | 4                                   | 11,8                     | 26                      | 340                           | 80                              | 130                               | 11                 | 80        | 210       |
| 0037002     | 4G4          | 12AWG                                 | 54x0,3                                                         | 0,2                            | 4                                   | 13,3                     | 34                      | 339                           | 90                              | 150                               | 6                  | 50        | 210       |
| 0037003     | 4G6          | 10AWG                                 | 82x0,3                                                         | 0,2                            | 6                                   | 14,9                     | 44                      | 321                           | 90                              | 150                               | 7                  | 60        | 150       |
| 0037004     | 4G10         | 8AWG                                  | 78x0,4                                                         | 0,25                           | 6                                   | 17,7                     | 61                      | 301                           | 120                             | 200                               | 9                  | 80        | 180       |
| 0037005     | 4G16         | 6AWG                                  | 126x0,4                                                        | 0,25                           | 6                                   | 21,5                     | 82                      | 285                           | 140                             | 230                               | 4                  | 32        | 190       |
| 0037006     | 4G25         | 4AWG                                  | 196x0,4                                                        | 0,25                           | 16                                  | 26,3                     | 108                     | 280                           | 120                             | 210                               | 3                  | 26        | 95        |
| 0037007     | 4G35         | 2AWG                                  | 276x0,4                                                        | 0,3                            | 16                                  | 29,7                     | 135                     | 271                           | 150                             | 260                               | 2                  | 13        | 85        |
| 0037008     | 4G50         | 1AWG                                  | 396x0,4                                                        | 0,3                            | 16                                  | 35,8                     | 168                     | 270                           | 190                             | 320                               | 2                  | 18        | 40        |
| 0037009     | 4G70         | 2/0AWG                                | 532x0,4                                                        | 0,3                            | 16                                  | 40,9                     | 207                     | 262                           | 190                             | 320                               | 2                  | 18        | 45        |
| 0037010     | 4G95         | 3/0AWG                                | 722x0,4                                                        | 0,3                            | 25                                  | 45,4                     | 250                     | 261                           | 250                             | 410                               | 2                  | 18        | 45        |
| 0037011     | 4G120        | 4/0AWG                                | 931x0,4                                                        | 0,3                            | 25                                  | 49,8                     | 292                     | 256                           | 260                             | 430                               | 2                  | 18        | 45        |
| 0037012     | 4G150        | 250kcmil                              | 1160x0,4                                                       | 0,4                            | 35                                  | 56,1                     | 335                     | 256                           | 270                             | 450                               | 2                  | 18        | 45        |
| 0037013     | 4G185        | 350kcmil                              | 1420x0,4                                                       | 0,4                            | 35                                  | 61,4                     | 382                     | 255                           | 280                             | 470                               | 2                  | 18        | 45        |
| 0037014     | 4G240        | 450kcmil                              | 1924x0,4                                                       | 0,4                            | 35                                  | 67,9                     | 453                     | 254                           | 290                             | 480                               | 2                  | 18        | 45        |
| 0037015     | 3X1,5+3G0,25 | 16AWG/24AWG                           | 29x0,25                                                        | 0,2                            | 2,5                                 | 11,4                     | 18                      | 366                           | 70                              | 110                               | 18                 | 90        | 230       |
| 0037016     | 3X2,5+3G0,5  | 14AWG/21AWG                           | 50x0,25                                                        | 0,2                            | 4                                   | 12,8                     | 26                      | 340                           | 80                              | 130                               | 11                 | 80        | 210       |
| 0037017     | 3X4+3G0,75   | 12AWG/19AWG                           | 54x0,3                                                         | 0,2                            | 6                                   | 13,6                     | 34                      | 339                           | 90                              | 150                               | 6                  | 50        | 210       |
| 0037018     | 3X6+3G1,0    | 10AWG/18AWG                           | 82x0,3                                                         | 0,2                            | 6                                   | 14,2                     | 44                      | 321                           | 90                              | 150                               | 7                  | 60        | 150       |
| 0037019     | 3X10+3G1,5   | 8AWG/16AWG                            | 78x0,4                                                         | 0,25                           | 6                                   | 17,4                     | 61                      | 301                           | 120                             | 200                               | 9                  | 80        | 180       |
| 0037020     | 3X16+3G2,5   | 6AWG/14AWG                            | 126x0,4                                                        | 0,25                           | 10                                  | 20,0                     | 82                      | 285                           | 140                             | 230                               | 4                  | 32        | 190       |
| 0037021     | 3X25+3G4     | 4AWG/12AWG                            | 196x0,4                                                        | 0,25                           | 10                                  | 24,3                     | 108                     | 280                           | 120                             | 210                               | 3                  | 26        | 95        |
| 0037022     | 3X35+3G6     | 2AWG/10AWG                            | 276x0,4                                                        | 0,3                            | 16                                  | 27,5                     | 135                     | 271                           | 150                             | 260                               | 2                  | 13        | 85        |
| 0037023     | 3X50+3G10    | 1AWG/8AWG                             | 396x0,4                                                        | 0,3                            | 16                                  | 31,1                     | 168                     | 270                           | 190                             | 320                               | 2                  | 18        | 40        |
| 0037024     | 3X70+3G10    | 2/0AWG/8AWG                           | 532x0,4                                                        | 0,3                            | 16                                  | 37,1                     | 207                     | 262                           | 190                             | 320                               | 2                  | 18        | 45        |
| 0036997     | 3X70+3G16    | 2/0AWG/6AWG                           | 532x0,4                                                        | 0,3                            | 16                                  | 37,4                     | 207                     | 262                           | 190                             | 320                               | 2                  | 18        | 45        |
| 0037025     | 3X95+3G16    | 3/0AWG/6AWG                           | 722x0,4                                                        | 0,3                            | 16                                  | 40,0                     | 250                     | 261                           | 250                             | 410                               | 2                  | 18        | 45        |
| 0037026     | 3X120+3G16   | 4/0AWG/6AWG                           | 931x0,4                                                        | 0,3                            | 25                                  | 42,6                     | 292                     | 256                           | 260                             | 430                               | 2                  | 18        | 45        |
| 0037027     | 3X150+3G25   | 250kcmil/4AWG                         | 1160x0,4                                                       | 0,4                            | 25                                  | 50,0                     | 335                     | 256                           | 270                             | 450                               | 2                  | 18        | 45        |
| 0037028     | 3X185+3G35   | 350kcmil/AWG2                         | 1420x0,4                                                       | 0,4                            | 35                                  | 55,6                     | 382                     | 255                           | 280                             | 470                               | 2                  | 18        | 45        |
| 0036998     | 3X240+3G50   | 450kcmil/AWG1                         | 1924x0,4                                                       | 0,4                            | 35                                  | 57,2                     | 453                     | 254                           | 290                             | 480                               | 2                  | 18        | 45        |

|                      |                       |             |
|----------------------|-----------------------|-------------|
| Creator: SESC / PDC  | Document: DB0037000EN | Page 3 of 3 |
| Released: LABU / PDC | Version: 10           |             |