

readycable® servo cable suitable for Beckhoff

ZK4500-0024-xxxx, basic cable PVC 7.5xd

MAT9371002



readycable® servo cable suitable for Beckhoff

ZK4500-0024-xxxx, basic cable PVC 7.5xd

- For heavy-duty applications
- PVC outer jacket
- Oil resistant (following DIN EN 50363-4-1)
- Silicone-free
- Flame retardant
- Overall shield
- Guarantee up to 4 years

Product description

Introducing the readycable® servo cable, designed specifically for Beckhoff ZK4500-0024-xxxx. This heavy-duty cable features a durable PVC outer jacket, making it oil resistant and flame retardant. Ideal for both indoor and outdoor applications above 5°C, it excels in unsupported and gliding travels up to 100m. Perfect for use in storage and retrieval units, machining units, and indoor cranes, this silicone-free cable ensures reliable performance in demanding environments.

Manufacturer attributes

|                      |                  |
|----------------------|------------------|
| Manufacturer Part No | ZK4500-0024-xxxx |
| Cable type           | Basic cable      |

Connectors

|             |                            |
|-------------|----------------------------|
| Connector A | Connector M23 socket 8-pin |
| Connector B | Circuit board connection   |

General properties

|                                                     |                     |
|-----------------------------------------------------|---------------------|
| Number of cores and conductor nominal cross-section | (4G2.5+2x(2x1.5)C)C |
| Outer diameter (d) max. mm                          | 17 mm               |
| Weight per km                                       | 434 kg/km           |
| Copper index kg/km                                  | 254 kg/km           |



## Electricity attributes

---



**Nominal voltage**

600/1,000V (according to DIN VDE 0298-3)

**UL Voltage Rating**

1000 V



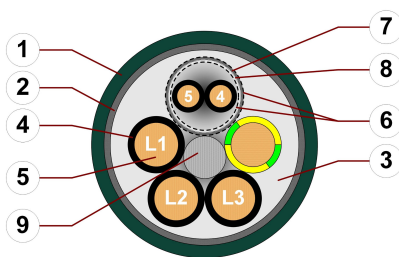
**Test voltage**

4000V (according to DIN EN 50395)



## Cable structure

|                                                                                    |                            |                                                                                                                                                                                                                                                                         |
|------------------------------------------------------------------------------------|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <b>Conductor</b>           | Stranded conductor in an especially bend-resistant version consisting of bare copper wires (according to DIN EN 60228).                                                                                                                                                 |
|    | <b>Core insulation</b>     | Mechanically high-quality, especially low-capacity XLPE mixture.                                                                                                                                                                                                        |
|    | <b>Core stranding</b>      | Power cores with control pair elements wound with elements for high-tensile stresses.                                                                                                                                                                                   |
|    | <b>Conductor colours</b>   | Power cores: Cores black with white digits, one core green-yellow. 1st core: U / L1 / C / L+ 2nd core: V / L2 3rd core: W / L3 / D / L- 2 control pairs: cores black with white digits. 1st control wire: 5 2nd control wire: 6 3rd control wire: 7 4th control wire: 8 |
| <b>Core group 1 core structure</b>                                                 |                            | 4G2.5                                                                                                                                                                                                                                                                   |
| <b>Core group 2 core structure</b>                                                 |                            | 2x(2x1.5)C)C                                                                                                                                                                                                                                                            |
|    | <b>Element shield</b>      | Extremely bend-resistant braiding made of tinned copper wires.                                                                                                                                                                                                          |
| <b>Inner jacket</b>                                                                |                            | PVC mixture adapted to suit the requirements in e-chains®.                                                                                                                                                                                                              |
|   | <b>Overall shield</b>      | Extremely flexible braiding made of tinned copper wires. Coverage linear approx. 70%, optical approx. 90%                                                                                                                                                               |
|  | <b>Outer jacket</b>        | Low-adhesion PVC mixture, adapted to suit the requirements in e-chains® (according to DIN EN 50363-4-1).                                                                                                                                                                |
|  | <b>Outer jacket colour</b> | Moss green (comparable to RAL 6005)                                                                                                                                                                                                                                     |
| <b>CFRIP®</b>                                                                      |                            | Strip cables faster: a tear strip is moulded into the inner jacket                                                                                                                                                                                                      |



1. Outer jacket: pressure-extruded, oil-resistant PVC mixture
2. Overall shield: extremely flexible braiding made of tinned copper wires.
3. Inner jacket: pressure-extruded, gusset-filling PVC mixture
4. Core insulation: mechanically high-quality, especially low-capacitance TPE mixture
5. Conductor: particularly resistant to bending made of bare copper wires
6. Element banding: plastic foil
7. Element shield: extremely flexible tinned copper wire
8. Shield film: aluminium-coated plastic foil
9. Strain relief: high tensile strength centre element



## Dynamic properties

|                                                                                    |                                     |                                               |
|------------------------------------------------------------------------------------|-------------------------------------|-----------------------------------------------|
|    | Min. bend radius, e-chain (factor)  | 7.5 x d                                       |
|    | Min. bend radius, e-chain           | 127.5 mm                                      |
|    | Min. bend radius, flexible (factor) | 6 x d                                         |
|    | Min. bend radius, fixed (factor)    | 4 x d                                         |
|    | Temperature e-chain®                | +5°C up to +70°C                              |
|    | Temperature, flexible               | -5°C to +70°C (according to DIN EN 60811-504) |
|    | Temperature, fixed                  | -15°C to +70°C (according to DIN EN 50305)    |
|    | v max. unsupported (speed)          | 10 m/s                                        |
|   | v max. gliding (speed)              | 5 m/s                                         |
|  | a max. (acceleration)               | 80 m/s <sup>2</sup>                           |
|  | travel length                       | Class 5                                       |
|  | torsion                             | No torsion                                    |



## chainflex®Lifetime

Guaranteed service life for this series according to guarantee conditions

Further information: [chainflex® guarantee](#)

| Double strokes* | 5 million    | 7.5 million  | 10 million   |
|-----------------|--------------|--------------|--------------|
| Temperature,    | R min.       | R min.       | R min.       |
| from/to [°C]    | [Factor x d] | [Factor x d] | [Factor x d] |
| +5 / +15        | 10           | 11           | 12           |
| +15 / +60       | 7.5          | 8.5          | 9.5          |
| +60 / +70       | 10           | 11           | 12           |

\* Higher number of double strokes possible - use the service life calculation function on this page.

## Properties and approvals

|  |                 |                                                                                                                                                     |
|--|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
|  | UV resistance   | Medium                                                                                                                                              |
|  | Oil resistance  | Oil-resistant (according to DIN EN 50363-4-1), Class 2                                                                                              |
|  | Flame-retardant | According to IEC 60332-1-2, Cable Flame, VW-1, FT1, FT2/Horizontal Flame                                                                            |
|  | Silicone-free   | Free from silicone which can affect paint adhesion (according to PV 3.10.7 – status 1992)                                                           |
|  | UL verified     | Certificate no. V293650: "The igus 4-year chainflex cable guarantee and service life calculator based on 2 billion test cycles per year"            |
|  | UL/CSA AWM      | Style 30052 und 20886, 1000V, 90°C                                                                                                                  |
|  | NFPA            | According to NFPA 79-2018, chapter 12.9                                                                                                             |
|  | REACH           | In accordance with Regulation (EC) No. 1907/2006 (REACH)                                                                                            |
|  | Lead-free       | According to 2011/65/EU (RoHS-II/RoHS-III)                                                                                                          |
|  | Cleanroom       | According to ISO Class 2. The outer jacket material of this series complies with CF5.10.07 - tested by IPA according to standard DIN EN ISO 14644-1 |
|  | CE              | According to 2014/35/EU                                                                                                                             |



## Certificates and standards

---

