

readycable® servo cable suitable for Beckhoff

ZK4501-0023-xxxx, extension cable PVC 7.5xd

MAT9371003



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- 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 for heavy-duty applications and compatible with Beckhoff ZK4501-0023-xxxx. This PVC extension cable features a durable outer jacket that is oil resistant and flame retardant. Ideal for both indoor and outdoor use in temperatures above 5°C, it excels in unsupported and gliding travels up to 100m. Perfect for storage and retrieval units, machining units, and indoor cranes, it ensures reliable performance in demanding environments.

Manufacturer attributes

|                      |                  |
|----------------------|------------------|
| Manufacturer Part No | ZK4501-0023-xxxx |
| Cable type           | Extension cable  |

Connectors

|             |                    |
|-------------|--------------------|
| Connector A | coupling, pin      |
| Connector B | round plug, socket |

General properties

|                                                     |                      |
|-----------------------------------------------------|----------------------|
| Number of cores and conductor nominal cross-section | (4G1.5+2x(2x0.75)C)C |
| Outer diameter (d) max. mm                          | 14.5 mm              |
| Weight per km                                       | 309 kg/km            |
| Copper index kg/km                                  | 167 kg/km            |



## Electricity attributes

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**Nominal voltage**

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

**UL Voltage Rating**

1000 V



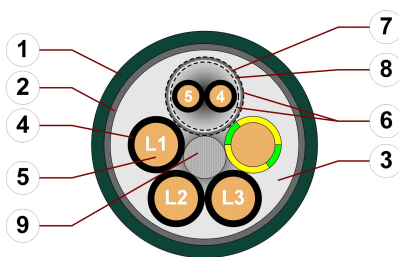
**Test voltage**

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>                                                 |                            | 4G1.5                                                                                                                                                                                                                                                                   |
| <b>Core group 2 core structure</b>                                                 |                            | 2x(2x0.75)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



## Properties and approvals

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



## Dynamic properties

|                                                                                    |                                     |                                               |
|------------------------------------------------------------------------------------|-------------------------------------|-----------------------------------------------|
|    | Min. bend radius, e-chain (factor)  | 7.5 x d                                       |
|    | Min. bend radius, e-chain           | 108.75 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.

Certificates and standards

