

readycable® encoder cable suitable for Bosch  
Rexroth IKS4038, basic cable TPE 7.5xd

MAT9100027



readycable® encoder cable suitable for Bosch  
Rexroth IKS4038, basic cable TPE 7.5xd

- For extremely heavy duty applications
- TPE outer jacket
- Oil-resistant (following DIN EN 60811-404), resistant to bio oils (following VDMA 24568 with Plantocut 8 S-MB tested by DEA)
- Halogen-free
- Silicone-free
- Hydrolysis and microbe-resistant
- PVC-free
- CFRIP®
- Guarantee up to 4 years

Product description

Introducing the readycable encoder cable, designed for Bosch Rexroth IKS4038. This robust cable is perfect for heavy-duty applications, featuring a durable TPE outer jacket that is oil-resistant, including bio-oils. It excels in both indoor and outdoor environments (excluding direct sunlight) and supports unsupported travels of 400m or more. Halogen-free and silicone-free, this cable is also hydrolysis and microbe-resistant, making it an ideal choice for storage, machining, and low-temperature applications.

Manufacturer attributes

|                      |             |
|----------------------|-------------|
| Manufacturer Part No | IKS4038     |
| Cable type           | Basic cable |

Connectors

|             |                               |
|-------------|-------------------------------|
| Connector A | Connector M23 socket 17-pin   |
| Connector B | SUB-D, socket, angled, 15-pin |

General properties

|                                                     |                               |
|-----------------------------------------------------|-------------------------------|
| Number of cores and conductor nominal cross-section | (4x(2x0.14)+(4x0.14)C+4x1.0)C |
| Outer diameter (d) max. mm                          | 10 mm                         |
| Weight per km                                       | 126 kg/km                     |
| Copper index kg/km                                  | 100 kg/km                     |



## Electricity attributes

|                                                                                  |                   |                                   |
|----------------------------------------------------------------------------------|-------------------|-----------------------------------|
|  | Nominal voltage   | 50V                               |
|                                                                                  | UL Voltage Rating | 300 V                             |
|  | Test voltage      | 1500V (according to DIN EN 50395) |

## Properties and approvals

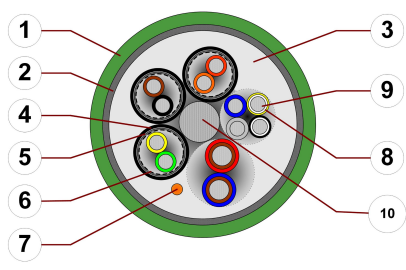
|                                                                                    |                |                                                                                                                                                     |
|------------------------------------------------------------------------------------|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
|    | UV resistance  | Medium                                                                                                                                              |
|    | Oil resistance | Oil-resistant (according to DIN EN 60811-404), bio-oil-resistant (according to VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4             |
|    | Silicone-free  | Free from silicone which can affect paint adhesion (according to PV 3.10.7 – status 1992)                                                           |
|    | Halogen-free   | According to DIN EN 60754                                                                                                                           |
|   | 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 AWM         | Style 10467 and 22355, 300 V, 80 °C                                                                                                                 |
|  | 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 1. The outer jacket material of this series complies with CF9.15.07 - tested by IPA according to standard DIN EN ISO 14644-1 |
|  | DESINA         | According to VDW, DESINA standardisation                                                                                                            |
|  | CE             | According to 2014/35/EU                                                                                                                             |



## Cable structure

|                                                                                    |                            |                                                                                                                            |
|------------------------------------------------------------------------------------|----------------------------|----------------------------------------------------------------------------------------------------------------------------|
|    | <b>Conductor</b>           | Stranded conductor in an especially flexible design consisting of tinned copper wires (according to DIN EN 60228).         |
|    | <b>Core insulation</b>     | Mechanically high-quality TPE mixture.                                                                                     |
|    | <b>Core stranding</b>      | According to measuring system specification                                                                                |
|    | <b>Conductor colours</b>   | according to measuring system specification                                                                                |
| <b>Core group 1 core structure</b>                                                 |                            | 4x(2x0.14)                                                                                                                 |
| <b>Core group 1 colour code</b>                                                    |                            | red/black, brown/green, yellow/violet, grey/pink                                                                           |
| <b>Core group 2 core structure</b>                                                 |                            | (4x0.14)C                                                                                                                  |
|    | <b>Element shield</b>      | Extremely flexible braiding made of tinned copper wires. Coverage linear approx. 70%, optical approx. 90%                  |
| <b>Element jacket</b>                                                              |                            | TPE mixture on pair shielding adapted to suit the requirements in e-chains®.                                               |
| <b>Inner jacket</b>                                                                |                            | TPE 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, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. |
|  | <b>Outer jacket colour</b> | Yellow-green (comparable to RAL 6018)                                                                                      |
|  | <b>CFRIP®</b>              | Strip cables faster: a tear strip is moulded into the inner jacket                                                         |



1. Outer jacket: pressure-extruded, halogen-free TPE mixture
2. Overall shield: extremely flexible braiding made of tinned copper wires
3. Inner jacket: pressure-extruded, gusset-filling TPE mixture
4. Element jacket: mechanically high-quality TPE mixture
5. Element shield: extremely flexible tinned copper wire
6. Banding: plastic foil
7. CFRIP: tear strip for faster stripping
8. Core insulation: mechanically high-quality TPE mixture
9. Conductor: stranded wire conductors in a particularly flexible design made of tinned copper wires
10. Strain relief: high tensile strength centre element



## Dynamic properties

|                                                                                    |                                     |                                                |
|------------------------------------------------------------------------------------|-------------------------------------|------------------------------------------------|
|    | Min. bend radius, e-chain (factor)  | 6.8 x d                                        |
|    | Min. bend radius, e-chain           | 68 mm                                          |
|    | Min. bend radius, flexible (factor) | 5 x d                                          |
|    | Min. bend radius, fixed (factor)    | 4 x d                                          |
|    | Temperature e-chain®                | -35°C up to +90°C                              |
|    | Temperature, flexible               | -50°C to +90°C (according to DIN EN 60811-504) |
|    | Temperature, fixed                  | -55°C to +90°C (according to DIN EN 50305)     |
|    | v max. unsupported (speed)          | 10 m/s                                         |
|   | v max. gliding (speed)              | 6 m/s                                          |
|  | a max. (acceleration)               | 100 m/s <sup>2</sup>                           |
|  | travel length                       | Class 6                                        |
|  | 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         |        | 12.5 million        |        |
|-----------------|---------------------|--------|---------------------|--------|---------------------|--------|
| Temperature,    | R min. [Factor x d] |        | R min. [Factor x d] |        | R min. [Factor x d] |        |
| from/to [°C]    | < 10 m              | ≥ 10 m | < 10 m              | ≥ 10 m | < 10 m              | ≥ 10 m |
| -35/-25         | 8.5                 | 10     | 9.5                 | 11     | 10.5                | 12     |
| -25/+80         | 6.8                 | 7.5    | 7.5                 | 8.5    | 8.8                 | 9.5    |
| +80/+90         | 8.5                 | 10     | 9.5                 | 11     | 10.5                | 12     |

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

Certificates and standards

