

readycable® hybrid cable Kuka Quantec direct connection cable

**MAT904141226**



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- PUR outer jacket
- Shielded
- Oil-resistant and coolant-resistant
- Flame retardant
- PVC and halogen-free
- Notch-resistant
- Hydrolysis and microbe-resistant

Product description

Introducing the readycable® hybrid cable Kuka Quantec direct connection cable, designed for reliable performance in robotic applications. This cable features a durable PUR outer jacket and is shielded for enhanced protection. It is oil and coolant resistant, flame retardant, and free from PVC and halogens. Additionally, it is notch-resistant and offers hydrolysis and microbe resistance, ensuring longevity and reliability in demanding environments. Perfect for the seventh robot axis, this cable meets the electrical standards of KUKA, ABB, and Fanuc.

General properties

|                                                     |                               |
|-----------------------------------------------------|-------------------------------|
| Number of cores and conductor nominal cross-section | (5x(2x6.0+2x2.5)+2x(6x1.0)C)C |
| Outer diameter (d) max. mm                          | 35.5 mm                       |
| Weight per km                                       | 2033 kg/km                    |
| Copper index kg/km                                  | 1250 kg/km                    |

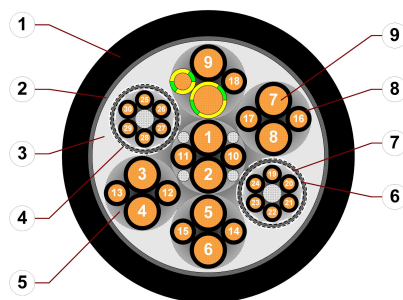
Electricity attributes

|                                                                                                    |                                          |
|----------------------------------------------------------------------------------------------------|------------------------------------------|
|  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>           | Finely stranded conductor consisting of bare copper wires (according to DIN EN 60228).                                                             |
|  | <b>Core insulation</b>     | Mechanically high-quality TPE mixture.                                                                                                             |
| <b>Core group 1 core structure</b>                                               |                            | 10x6.0                                                                                                                                             |
| <b>Core group 1 colour code</b>                                                  |                            | Black cores with white numbers 1-9, one green-yellow core                                                                                          |
| <b>Core group 2 core structure</b>                                               |                            | 10x2.5                                                                                                                                             |
|  | <b>Inner jacket</b>        | TPE mixture adapted to suit the requirements in e-chains®.                                                                                         |
|  | <b>Overall shield</b>      | Bend-resistant braiding made of tinned copper wires. Coverage approx. 50% linear, approx. 80% optical                                              |
|  | <b>Outer jacket</b>        | Low-adhesion, halogen-free, highly abrasion-resistant PUR mixture, adapted to suit the requirements in e-chains® (according to DIN EN 50363-10-2). |
|  | <b>Outer jacket colour</b> | Jet black (comparable to RAL 9005)                                                                                                                 |



1. Outer jacket: pressure extruded PUR mixture
2. Overall shield: flexible braiding made of tinned copper wires.
3. Inner jacket: pressure extruded, gusset-filling TPE mixture
4. Element banding: synthetic fleece over plastic foil
5. Bundles with optimised pitch length and direction
6. Element shield: bend-resistant braiding of tinned copper wires
7. Element banding: plastic foil over plastic fleece
8. Core insulation: mechanically high-quality TPE mixture
9. Conductor: fine stranded wire made of bare copper wires



## Properties and approvals

|                                                                                    |                        |                                                                                                                                        |
|------------------------------------------------------------------------------------|------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
|    | <b>UV resistance</b>   | High                                                                                                                                   |
|    | <b>Oil resistance</b>  | Oil-resistant (according to DIN EN 50363-10-2), Class 3                                                                                |
|    | <b>Offshore</b>        | MUD-resistant according to NEK 606 - status 2018                                                                                       |
|    | <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>Halogen-free</b>    | According to DIN EN 60754                                                                                                              |
|    | <b>UL verified</b>     | Certificate no. B129699: "igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year" |
|   | <b>NFPA</b>            | According to NFPA 79-2018, chapter 12.9                                                                                                |
|  | <b>REACH</b>           | In accordance with Regulation (EC) No. 1907/2006 (REACH)                                                                               |
|  | <b>CE</b>              | According to 2014/35/EU                                                                                                                |



## Dynamic properties

|  |                                     |                                                |
|--|-------------------------------------|------------------------------------------------|
|  | Min. bend radius, e-chain (factor)  | 10 x d                                         |
|  | Min. bend radius, e-chain           | 355 mm                                         |
|  | Min. bend radius, flexible (factor) | 8 x d                                          |
|  | Min. bend radius, fixed (factor)    | 5 x d                                          |
|  | Temperature e-chain®                | -25°C up to +80°C                              |
|  | Temperature, flexible               | -40°C to +80°C (according to DIN EN 60811-504) |
|  | Temperature, fixed                  | -50°C to +80°C (according to DIN EN 50305)     |
|  | v max. unsupported (speed)          | 3 m/s                                          |
|  | v max. gliding (speed)              | 2 m/s                                          |
|  | a max. (acceleration)               | 20 m/s <sup>2</sup>                            |
|  | torsion                             | No torsion                                     |

## Certificates and standards

