

readycable® power cable suitable for Siemens

6FX\_002-5CA51, basic cable, TPE 7.5xd

MAT9050006



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

Product description

Introducing the readycable® power cable, designed for Siemens 6FX\_002-5CA51 applications. This durable cable features a TPE outer jacket, ensuring high resistance to oil, UV rays, and flame. Ideal for both indoor and outdoor use, it excels in demanding environments, including machining units and high-bay warehouses. With hydrolysis and microbe resistance, this cable is perfect for unsupported travels and low-temperature applications, making it a reliable choice for any heavy-duty task.

Manufacturer attributes

|                      |               |
|----------------------|---------------|
| Manufacturer Part No | 6FX_002-5CA51 |
| Cable type           | Basic cable   |

Connectors

|             |                    |
|-------------|--------------------|
| Connector A | round plug, socket |
| Connector B | open cable end     |



General properties

|                                                     |           |
|-----------------------------------------------------|-----------|
| Number of cores and conductor nominal cross-section | (4G6.0)C  |
| Outer diameter (d) max. mm                          | 16 mm     |
| Weight per km                                       | 423 kg/km |
| Copper index kg/km                                  | 288 kg/km |

Electricity attributes

|                                                                                                         |                                          |
|---------------------------------------------------------------------------------------------------------|------------------------------------------|
|  <b>Nominal voltage</b> | 600/1,000V (according to DIN VDE 0298-3) |
| <b>UL Voltage Rating</b>                                                                                | 1000 V                                   |
|  <b>Test voltage</b>    | 4000V (according to DIN EN 50395)        |
| <b>Maximum conductor resistance at 20°C [ <math>\mu</math>m]</b>                                        | 3.3000                                   |



## Cable structure



### Conductor

Stranded conductor in an especially bend-resistant version consisting of bare copper wires (according to DIN EN 60228).



### Core insulation

Mechanically high-quality, especially low-capacity XLPE mixture.



### Conductor colours

Cores black with white numbers, one core green-yellow. 1st core: U / L1 / C / L+ 2nd core: V / L2  
3rd core: W / L3 / D / L- 4th core: 4 / N  
(4G6.0)C

### Core group 1 core structure



### Inner jacket

TPE mixture adapted to suit the requirements in e-chains®.



### Overall shield

Extremely flexible braiding made of tinned copper wires. Coverage linear approx. 70%, optical approx. 90%



### Outer jacket

Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®.



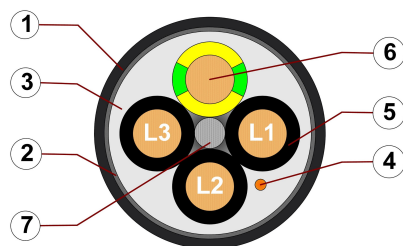
### Outer jacket colour

Signal black (comparable to RAL 9004)



### CFRIP®

Strip cables faster: a tear strip is moulded into the inner jacket



1. Outer jacket: pressure extruded, flame-retardant TPE mixture
2. Overall shield: extremely flexible braiding made of tinned copper wires
3. Inner jacket: pressure-extruded, gusset-filling TPE mixture
4. CFRIP: tear strip for faster stripping
5. Core insulation: mechanically high-quality, especially low-capacity XLPE mixture
6. Conductor: particularly flexible version consisting of bare copper wires
7. Strain relief: high tensile strength centre element



## Properties and approvals

|                                                                                    |                        |                                                                                                                                                           |
|------------------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <b>UV resistance</b>   | High                                                                                                                                                      |
|    | <b>Oil resistance</b>  | 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                   |
|    | <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 10492 and 22188, 1000 V, 80 °C                                                                                                                      |
|    | <b>NFPA</b>            | According to NFPA 79-2018, chapter 12.9                                                                                                                   |
|   | <b>DNV</b>             | Type approval certificate TAE00003X9                                                                                                                      |
|  | <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 1. The outer jacket material of this series complies with CF34.UL.25.04.D - 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           | 120 mm                                         |
|    | Min. bend radius, flexible (factor) | 6 x d                                          |
|    | Min. bend radius, fixed (factor)    | 4 x d                                          |
|    | Temperature e-chain®                | -35°C up to +90°C                              |
|    | Temperature, flexible               | -45°C to +90°C (according to DIN EN 60811-504) |
|    | Temperature, fixed                  | -50°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)               | 80 m/s <sup>2</sup>                            |
|  | travel length                       | Class 13                                       |
|  | 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,    | v max. [m/s] |         | a max. | Travel | R min. [Factor x d] | R min. [Factor x d] | R min. [Factor x d] |
| from/to [°C]    | unsupported  | gliding | [m/s²] | [m]    |                     |                     |                     |
| -35 / -25       |              |         |        |        | 10                  | 11                  | 12                  |
| -25 / +80       | 10           | 6       | 80     | ≤ 400  | 7.5                 | 8.5                 | 9.5                 |
| +80 / +90       |              |         |        |        | 10                  | 11                  | 12                  |

\* Higher number of double strokes possible - please ask for your individual calculation.

Certificates and standards

