

# Control cable | TPE | chainflex® CF98

**36** 40,000,000  
Cycles guaranteed

**4 x d**  
Bend radius E-Chain®

**328.1 ft**  
Travel distance E-Chain®

- For maximum mechanical load requirements and especially small bend radii to 4 x d
- TPE outer jacket
- Oil and bio-oil-resistant
- PVC and halogen-free
- Low-temperature-flexibility
- Hydrolysis and microbe-resistant

### Dynamic Information

 <b>Bend radius</b>	<b>E-Chain® linear</b>	min. 4 x d
	<b>flexible</b>	min. 4 x d
	<b>fixed</b>	min. 3 x d
 <b>Temperature</b>	<b>E-Chain® linear</b>	-31 °F to +194 °F (-35 °C to +90 °C)
	<b>flexible</b>	-58 °F to +194 °F (-50 °C to +90 °C)
	<b>fixed</b>	-67 °F to +194 °F (-55 °C to +90 °C)
 <b>v max.</b>	<b>unsupported</b>	32.81 ft/s (10 m/s)
	<b>gliding</b>	19.69 ft/s (6 m/s)
 <b>a max.</b>		328.1 ft/s <sup>2</sup> (100 m/s <sup>2</sup> )
 <b>Travel distance</b>		Short, very fast applications with small radii and restricted installation space, Class 5
 <b>Torsion</b>		Torsion ±90°, with 3.281ft (1m) cable length, Class 2

### Cable structure

 <b>Conductor</b>	Conductor consisting of a highly flexible stranded special alloy.
 <b>Conductor insulation</b>	Mechanically high-quality TPE mixture.
 <b>Conductor construction</b>	Conductors cabled in one layer with especially short pitch length.
 <b>Color code</b>	Color code in accordance with DIN 47100. <b>CF98-02-03-INI:</b> brown, blue, black <b>CF98-03-04-INI:</b> brown, blue, black, white
 <b>Outer jacket</b>	Low-adhesion mixture on the basis of TPE, especially abrasion-resistant and highly flexible, adapted to suit the requirements in E-Chains®. Color: Dark blue (similar to RAL 5011)

### Electrical Information

 <b>Nominal voltage</b>	300 V
 <b>Test voltage</b>	1500 V

### Properties and approvals

 <b>UV resistance</b>	High
 <b>Oil resistance</b>	Oil-resistant (following DIN EN 60811-404), bio-oil-resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
 <b>Silicone-free</b>	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
 <b>Halogen-free</b>	Following DIN EN 60754

Basic requirements	low	1	2	3	4	5	6	7	highest
Travel distance	unsupported	1	2	3	4	5	6	≥ 1312 ft	
Oil resistance	none	1	2	3	4	highest			
Torsion	none	1	2	3	4	±360°			

## Class 7.5.4.2

-  **UL verified**
-  **EAC**
-  **REACH**
-  **Lead-free**
-  **Cleanroom**
-  **CE**

Certificate No. B129699: igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year  
Certificate No. RU C-DE.ME77.B.00300/19 (TR ZU)

In accordance with regulation (EC) No. 1907/2006 (REACH)

Following 2011/65/EC (RoHS-II/RoHS-III)

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  
Following 2014/35/EU

### Guaranteed service life (details see page 26-27)

Cycles*	20 million	30 million	40 million
Temperature, from/to [°F]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-31/-13	5	6	7
-13/+176	4	5	6
+176/+194	5	6	7

\* Higher number of cycles? Online lifetime calculation ► [www.chainflex.com/chainflexlife](http://www.chainflex.com/chainflexlife)

### Typical application areas

- For maximum mechanical load requirements and especially small bend radii to 4 x d, Class 7
- Especially for short, very fast applications with small radii and restricted installation space, Class 5
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- Torsion ±90°, with 3.281ft (1m) cable length, Class 2
- Indoor and outdoor applications, UV-resistant
- Pick and place machines, Automatic doors, Cleanroom, very quick handling

Part No.	AWG	Number of Conductors and rated cross section	Outer diameter max.		Copper index		Weight	
			[mm <sup>2</sup> ]	[in.] [mm]	[lbs/mft] [kg/km]	[lbs/mft] [kg/km]		
<b>CF98-01-02</b>	26	2 x 0.14	0.18	4.5	3.4	5	12.1	18
<b>CF98-01-03</b>	26	3 x 0.14	0.18	4.5	4.0	6	13.4	20
<b>CF98-01-04</b>	26	4 x 0.14	0.20	5.0	5.4	8	16.8	25
<b>CF98-01-08</b>	26	8 x 0.14	0.26	6.5	10.1	15	28.9	43
<b>CF98-02-03-INI</b>	24	3 x 0.25	0.20	5.0	7.4	11	19.5	29
<b>CF98-02-04</b>	24	4 x 0.25	0.22	5.5	10.1	15	24.2	36
<b>CF98-02-07<sup>11)</sup></b>	24	7 x 0.25	0.28	7.0	16.8	25	39.6	59
<b>CF98-02-08</b>	24	8 x 0.25	0.30	7.5	20.2	30	45.0	67
<b>CF98-03-04-INI</b>	22	4 x 0.34	0.24	6.0	10.1	15	26.2	39
<b>CF98-05-04</b>	20	4 x 0.5	0.24	6.0	22.2	33	35.6	53

<sup>11)</sup> Phase-out model

**Note:** The given outer diameters are maximum values.  
G = with green-yellow earth core x = without earth core

### cost down...



**igus** ...life up

### Reduce cost, improve technology, now!

Do the chainflex® price check now ...  
[www.igus.com/info/cable-price-check](http://www.igus.com/info/cable-price-check)

... just one idea for you: Reduce cost with CF298

