


Motor cables
















chainflex® cable	Jacket	Shield	Bend radius e-chain® [factor x d]	Temperature e-chain® from/to [°C]	Approvals and standards	Oil-resistant	Torsion-resistant v max. [m/s] unsupported	v max. [m/s] gliding a max.	Page	
Motor cables										
CF885	PVC		15	+5/+70	UL, IEC, NFPA, C-UL, ENEC, EAC, REACH, RoHS, CE, UK, CA		3	20	318	
CF886	PVC	✓	15	+5/+70	UL, IEC, NFPA, C-UL, ENEC, EAC, REACH, RoHS, CE, UK, CA		3	20	320	
CF210.UL	PVC	✓	10	+5/+70	UL, IEC, NFPA, C-UL, ENEC, EAC, REACH, RoHS, clean room, CE, UK, CA	✓	10	2	50	322
CF30	PVC		7.5	+5/+70	UL, IEC, NFPA, C-UL, ENEC, EAC, REACH, RoHS, clean room, CE, UK, CA	✓ ✓	10	5	80	324
CF31	PVC	✓	7.5	+5/+70	UL, IEC, NFPA, C-UL, ENEC, EAC, REACH, RoHS, clean room, CE, UK, CA	✓	10	5	80	328
CF895	iguPUR		15	-20/+80	UL, IEC, NFPA, C-UL, ENEC, EAC, REACH, RoHS, CE, UK, CA	✓	3	20	332	
CF896	iguPUR	✓	15	-20/+80	UL, IEC, NFPA, C-UL, ENEC, EAC, REACH, RoHS, CE, UK, CA	✓	3	20	334	
CF270.UL.D	PUR	✓	10	-25/+80	UL, IEC, NFPA, C-UL, ENEC, EAC, REACH, RoHS, clean room, CE, UK, CA	✓	10	2	50	336
CF27.D	PUR	✓	7.5	-25/+80	UL, IEC, NFPA, C-UL, ENEC, EAC, REACH, RoHS, clean room, CE, UK, CA	✓	10	5	80	340
CF34.UL.D	TPE		7.5	-35/+90	UL, IEC, NFPA, C-UL, ENEC, EAC, REACH, RoHS, clean room, CE, UK, CA	✓ ✓	10	6	80	344
CF35.UL	TPE	✓	7.5	-35/+90	UL, IEC, NFPA, C-UL, ENEC, EAC, REACH, RoHS, clean room, CE, UK, CA	✓	10	6	80	348
CF37.D	TPE		7.5	-35/+90	UL, IEC, NFPA, C-UL, ENEC, EAC, REACH, RoHS, clean room, CE, UK, CA	✓ ✓	10	6	80	352
CF38	TPE	✓	7.5	-35/+90	UL, IEC, NFPA, C-UL, ENEC, EAC, REACH, RoHS, clean room, CE, UK, CA	✓	10	6	80	354
Spindle cables/Single cores										
CF885	PVC		15	+5/+70	UL, IEC, NFPA, C-UL, ENEC, EAC, REACH, RoHS, CE, UK, CA		3	20	356	
CF885.PE	PVC		15	+5/+70	UL, IEC, NFPA, C-UL, ENEC, EAC, REACH, RoHS, CE, UK, CA		3	20	358	
CF886	PVC	✓	15	+5/+70	UL, IEC, NFPA, C-UL, ENEC, EAC, REACH, RoHS, CE, UK, CA		3	20	360	
CF270.UL.D	PUR	✓	10	-25/+80	UL, IEC, NFPA, C-UL, ENEC, EAC, REACH, RoHS, clean room, CE, UK, CA	✓	10	2	50	362
CF300.UL.D	TPE		7.5	-35/+90	UL, IEC, NFPA, C-UL, ENEC, EAC, REACH, RoHS, clean room, CE, UK, CA	✓ ✓	10	6	100	364
CFPE	TPE		7.5	-35/+90	UL, IEC, NFPA, C-UL, ENEC, EAC, REACH, RoHS, clean room, CE, UK, CA	✓ ✓	10	6	100	366
CF310.UL	TPE	✓	7.5	-35/+90	UL, IEC, NFPA, C-UL, ENEC, EAC, REACH, RoHS, clean room, CE, UK, CA	✓	10	6	100	368
CF330.D	TPE		7.5	-35/+90	UL, IEC, NFPA, C-UL, ENEC, EAC, REACH, RoHS, clean room, CE, UK, CA	✓ ✓	10	6	100	370
CF340	TPE	✓	7.5	-35/+90	UL, IEC, NFPA, C-UL, ENEC, EAC, REACH, RoHS, clean room, CE, UK, CA	✓	10	6	100	372
Medium voltage cables										
CFCRANE.PUR	PUR	✓	10	-20/+80	UL, IEC, NFPA, C-UL, ENEC, EAC, REACH, RoHS, CE, UK, CA	✓	10	6	50	374
CFCRANE	igupren	✓	10	-20/+80	UL, IEC, NFPA, C-UL, ENEC, EAC, REACH, RoHS, CE, UK, CA	✓	10	6	50	376
Twistable motor cables (twistable cables chapter ▶ Page 378)										
CFROBOT6	PUR		10	-25/+80	UL, IEC, NFPA, C-UL, ENEC, EAC, REACH, RoHS, clean room, CE, UK, CA	✓ ✓			398	
CFROBOT7	PUR	✓	10	-25/+80	UL, IEC, NFPA, C-UL, ENEC, EAC, REACH, RoHS, clean room, CE, UK, CA	✓ ✓			400	

36-month chainflex® guarantee
 Guaranteed service life for predictable reliability
 ▶ Selection table from page 314

 www.igus.eu/chainflexlife














chainflex® cable	Temperature, from/to [°C]	v max. [m/s]		a max. [m/s ²]	Travel distance [m]	Minimum bend radius [factor x d]			Page	
		unsupported	gliding			5 million (1 million) double strokes *	7.5 million (3 million) double strokes *	10 million (5 million) double strokes *		
Motor cables										
 CF885	+5 / +15 +15 / +60 +60 / +70	3	-	20	≤ 10	17.5 15 17.5	18.5 16 18.5	19.5 17 19.5	318	
 CF886	+5 / +15 +15 / +60 +60 / +70	3	-	20	≤ 10	17.5 15 17.5	18.5 16 18.5	19.5 17 19.5	320	
 CF210.UL	+5 / +15 +15 / +60 +60 / +70	10	2	50	≤ 10	12.5 10 12.5	13.5 11 13.5	14.5 12 14.5	322	
 CF30	+5 / +15 +15 / +60 +60 / +70	10	5	80	≤ 100	10 7.5 10	11 8.5 11	12 9.5 12	324	
 CF31	+5 / +15 +15 / +60 +60 / +70	10	5	80	≤ 100	10 7.5 10	11 8.5 11	12 9.5 12	328	
 CF895	-20 / -10 -10 / +70 +70 / +80	3	-	20	≤ 10	17.5 15 17.5	18.5 16 18.5	19.5 17 19.5	332	
 CF896	-20 / -10 -10 / +70 +70 / +80	3	-	20	≤ 10	17.5 15 17.5	18.5 16 18.5	19.5 17 19.5	334	
 CF270.UL.D	-25 / -15 -15 / +70 +70 / +80	10	2	50	≤ 10	12.5 10 12.5	13.5 11 13.5	14.5 12 14.5	336	
 CF27.D	-25 / -15 -15 / +70 +70 / +80	10	5	80	≤ 100	10 7.5 10	11 8.5 11	12 8.5 12	340	
 CF34.UL.D	-35 / -25 -25 / +80 +80 / +90	10	6	80	≤ 400	10 7.5 10	11 8.5 11	12 9.5 12	344	
 CF35.UL	-35 / -25 -25 / +80 +80 / +90	10	6	80	≤ 400	10 7.5 10	11 8.5 11	12 9.5 12	348	
						5 million	7.5 million	12.5 million		
 CF37.D	-35 / -25 -25 / +80 +80 / +90	10	6	80	≤ 400	10 7.5 10	11 8.5 11	12 9.5 12	352	
 CF38	-35 / -25 -25 / +80 +80 / +90	10	6	80	≤ 400	10 7.5 10	11 8.5 11	12 9.5 12	354	

⁽¹⁾ Guaranteed service life for these series (details ► see page 28-29)

* Higher number of double strokes? Calculate service life online: ► www.igus.eu/chainflexlife
Values in brackets apply to the CF885/CF886 and CF895/CF896 series



chainflex® cable	Temperature, from/to [°C]	v max. [m/s]		a max. [m/s ²]	Travel distance [m]	Minimum bend radius [factor x d]		Minimum bend radius [factor x d]		Minimum bend radius [factor x d]		Page
		unsupported	gliding			5 million (1 million) double strokes *	7.5 million (3 million) double strokes *	10 million (5 million) double strokes *				
Spindle cables/Single cores												
 CF885	+5 / +15 +15 / +60 +60 / +70	3	-	20	≤ 10	17.5 15 17.5	18.5 16 18.5	19.5 17 19.5				356
 CF885.PE	+5 / +15 +15 / +60 +60 / +70	3	-	20	≤ 10	17.5 15 17.5	18.5 16 18.5	19.5 17 19.5				358
 CF886	+5 / +15 +15 / +60 +60 / +70	3	-	20	≤ 10	17.5 15 17.5	18.5 16 18.5	19.5 17 19.5				360
 CF270.UL.D	-25 / -15 -15 / +70 +70 / +80	10	2	50	≤ 10	12.5 10 12.5	13.5 11 13.5	14.5 12 14.5				362
 CF300.UL.D	-35 / -25 -25 / +80 +80 / +90	10	6	100	≤ 400	10 7.5 10	11 8.5 11	12 9.5 12				364
 CFPE	-35 / -25 -25 / +80 +80 / +90	10	6	100	≤ 400	10 7.5 10	11 8.5 11	12 9.5 12				366
 CF310.UL	-35 / -25 -25 / +80 +80 / +90	10	6	100	≤ 400	10 7.5 10	11 8.5 11	12 9.5 12				368
						5 million	7.5 million	12.5 million				
 CF330.D	-35 / -25 -25 / +80 +80 / +90	10	6	100	≤ 400	10 7.5 10	11 8.5 11	12 9.5 12				370
 CF340	-35 / -25 -25 / +80 +80 / +90	10	6	100	≤ 400	10 7.5 10	11 8.5 11	12 9.5 12				372
Medium voltage cables												
 CFRANE.PUR	-20 / -10 -10 / +70 +70 / +80	10	6	50	≤ 400	12.5 10 12.5	13.5 11 13.5	14.5 12 14.5				374
 CFRANE	-20 / -10 -10 / +70 +70 / +80	10	6	50	≤ 400	12.5 10 12.5	13.5 11 13.5	14.5 12 14.5				376

⁽¹⁾ Guaranteed service life for these series (details ► see page 28-29)

* Higher number of double strokes? Calculate service life online: ► www.igus.eu/chainflexlife
 Figures in brackets refer to series CF885 and CF886



Motor cable | PVC | chainflex® CF885

- 36** 5,000,000 Double strokes guaranteed
- 15 x d** Bend radius, e-chain®
- 10m** Travel distance, e-chain®

- For flexing applications
- PVC outer jacket
- Flame-retardant

Dynamic information

Bend radius	e-chain® linear	minimum 15 x d
	flexible	minimum 12 x d
	fixed	minimum 8 x d
Temperature	e-chain® linear	+5°C up to +70°C
	flexible	-5°C up to +70°C (following DIN EN 60811-504)
	fixed	-15°C up to +70°C (following DIN EN 50305)
v max.	unsupported	3m/s
a max.		20m/s²
Travel distance		Unsupported travels up to 10m, Class 1

Cable structure

Conductor	Conductor consisting of bare copper wires (according to DIN EN 60228).
Core insulation	Mechanically high-quality, especially low-capacitance TPE mixture.
Core structure	Cores wound with an optimised pitch length.
Core identification	Black cores with white numbers, one green-yellow core. 1. Core: U / L1 / C / L+ 2. Core: V / L2 3. Core: W / L3 / D / L-
Outer jacket	Low-adhesion PVC mixture, adapted to suit the requirements in e-chains®. Colour: Pastel orange (similar to RAL 2003)

Electrical information

Nominal voltage	600/1,000V (following DIN VDE 0298-3) 1,000V (following UL)
Testing voltage	4,000V (following DIN EN 50395)

Properties and approvals

Flame-retardant	According to IEC 60332-1-2, Cable Flame, VW-1, FT1, FT2 / Horizontal Flame
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL verified	Certificate No. B129699: "igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year"
UL/CSA AWM	See data sheet for details ► www.igus.eu/CF885

EPLAN download, configurators ► www.igus.eu/CF885

Basic requirements	low	1	2	3	4	5	6	7	highest
Travel distance	unsupported	1	2	3	4	5	6	≥ 400m	
Oil resistance	none	1	2	3	4	highest			
Torsion	none	1	2	3	4	±360°			

Class 3.1.1.1

NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.00302/19
REACH	In accordance with regulation (EC) No. 1907/2006 (REACH)
Lead-free	Following 2011/65/EC (RoHS-II/RoHS-III)
CE	Following 2014/35/EU
UKCA	In accordance with the valid regulations of the United Kingdom (as at 08/2021)

Guaranteed service life (details see page 28-29)

Double strokes*	1 million	3 million	5 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	17.5	18.5	19.5
+15/+60	15	16	17
+60/+70	17.5	18.5	19.5

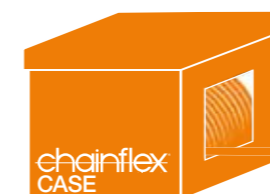
* Higher number of double strokes? Service life calculation online ► www.igus.eu/chainflexlife

Typical application areas

- For flexing applications, Class 3
- Especially for unsupported travels, Class 1
- Without influence of oil, Class 1
- No torsion, Class 1
- Preferably indoor applications
- Wood/stone processing, packaging industry, feeding, handling, adjusting devices

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF885.15.04	4G1.5	8.0	67	105
CF885.25.04	4G2.5	10.0	110	163
CF885.40.04	4G4.0	11.5	175	244
CF885.60.04	4G6.0	13.5	237	360
CF885.100.04	4G10	17.0	412	514
CF885.160.04	4G16	20.0	690	857

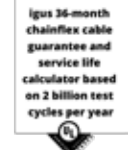
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core x = without earth core



Cables available in the chainflex® CASE

Simple savings on delivery, storage space and re-ordering with the chainflex® CASE - ship'n store by igus®.

More on this on page 24/25 and online: www.igus.eu/cf-case



Motor cable | PVC | chainflex® CF886

36 5,000,000 Double strokes guaranteed **15 x d** Bend radius, e-chain® **10m** Travel distance, e-chain®

- For flexing applications
- PVC outer jacket
- Shielded
- Flame-retardant

Dynamic information

Bend radius	e-chain® linear flexible	minimum 15 x d
	fixed	minimum 12 x d
	e-chain® linear flexible	minimum 8 x d
Temperature	e-chain® linear flexible	+5°C up to +70°C
	fixed	-5°C up to +70°C (following DIN EN 60811-504)
v max.	unsupported	3m/s
a max.		20m/s ²
Travel distance		Unsupported travels up to 10m, Class 1

Cable structure

Conductor	Conductor consisting of bare copper wires (according to DIN EN 60228).
Core insulation	Mechanically high-quality, especially low-capacitance TPE mixture.
Core structure	Cores wound with an optimised pitch length.
Core identification	Black cores with white numbers, one green-yellow core. 1. Core: U / L1 / C / L+ 2. Core: V / L2 3. Core: W / L3 / D / L-
Overall shield	Braiding made of tinned copper wires. Coverage approx. 60% optical
Outer jacket	Low-adhesion PVC mixture, adapted to suit the requirements in e-chains®. Colour: Pastel orange (similar to RAL 2003)

Electrical information

Nominal voltage	600/1,000V (following DIN VDE 0298-3) 1,000V (following UL)
Testing voltage	4,000V (following DIN EN 50395)

Properties and approvals

Flame-retardant	According to IEC 60332-1-2, Cable Flame, VW-1, FT1, FT2 / Horizontal Flame
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)

EPLAN download, configurators ► www.igus.eu/CF886

36-month guarantee ... more than 1,350 cable types from stock ... no cutting charges



EU2023

EU2023



Basic requirements
Travel distance
Oil resistance
Torsion

low	1	2	3	4	5	6	7	highest
Travel distance	1	2	3	4	5	6	7	≥ 400m
Oil resistance	1	2	3	4	highest			
Torsion	1	2	3	4	±360°			

Class 3.1.1.1

- UL verified** Certificate No. B129699: "igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year"
See data sheet for details ► www.igus.eu/CF886
- UL/CSA AWM**
- NFPA** Following NFPA 79-2018, chapter 12.9
- EAC** Certificate No. RU C-DE.ME77.B.00302/19
- REACH** In accordance with regulation (EC) No. 1907/2006 (REACH)
- Lead-free** Following 2011/65/EC (RoHS-II/RoHS-III)
- CE** Following 2014/35/EU
- UKCA** In accordance with the valid regulations of the United Kingdom (as at 08/2021)

Guaranteed service life (details see page 28-29)

Double strokes*	1 million	3 million	5 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	17.5	18.5	19.5
+15/+60	15	16	17
+60/+70	17.5	18.5	19.5

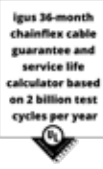
* Higher number of double strokes? Service life calculation online ► www.igus.eu/chainflexlife

Typical application areas

- For flexing applications, Class 3
- Especially for unsupported travels, Class 1
- Without influence of oil, Class 1
- No torsion, Class 1
- Preferably indoor applications
- Wood/stone processing, packaging industry, feeding, handling, adjusting devices

Part No.	Number of cores and conductor nominal cross section [mm ²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF886.15.04	(4G1.5)C	9.0	82	119
CF886.25.04	(4G2.5)C	10.5	132	181
CF886.40.04	(4G4.0)C	12.0	204	263
CF886.60.04	(4G6.0)C	14.5	269	377
CF886.100.04	(4G10)C	18.5	458	577
CF886.160.04	(4G16)C	21.0	760	829

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core x = without earth core



Motor cable | PVC | chainflex® CF210.UL

36 10 million
Double strokes guaranteed

10 x d
Bend radius, e-chain®

10m
Travel distance, e-chain®

- For medium duty applications
- PVC outer jacket
- Shielded
- Oil-resistant
- Flame-retardant

Dynamic information

Bend radius	e-chain® linear	minimum 10 x d
	flexible	minimum 8 x d
	fixed	minimum 5 x d
Temperature	e-chain® linear	+5°C up to +70°C
	flexible	-5°C up to +70°C (following DIN EN 60811-504)
	fixed	-15°C up to +70°C (following DIN EN 50305)
v max.	unsupported	10m/s
	gliding	2m/s
a max.		50m/s ²
Travel distance		Unsupported travels and up to 10m for gliding applications, Class 2

Cable structure

Conductor	Stranded conductor in bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality, especially low-capacitance XLPE mixture.
Core structure	Cores wound with high tensile strength centre elements.
Core identification	Black cores with white numbers, one green-yellow core. 1. Core: U / L1 / C / L+ 2. Core: V / L2 3. Core: W / L3 / D / L-
Intermediate layer	Foil taping over the outer layer.
Overall shield	Bending-resistant braiding made of tinned copper wires. Coverage linear approx. 55%, optical approx. 80%
Outer jacket	Low-adhesion, oil-resistant PVC mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-4-1). Colour: Pastel orange (similar to RAL 2003)

Electrical information

Nominal voltage	600/1,000V (following DIN VDE 0298-3) 1,000V (following UL)
Testing voltage	4,000V (following DIN EN 50395)

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-4-1), Class 2

Basic requirements
Travel distance
Oil resistance
Torsion

low	1	2	3	4	5	6	7	highest
unsupported	1	2	3	4	5	6	7	≥ 400m
none	1	2	3	4	highest			
none	1	2	3	4	±360°			

Class 4.2.2.1

Flame-retardant	According to IEC 60332-1-2, Cable Flame, VW-1, FT1, FT2 / Horizontal Flame
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL verified	Certificate No. B129699: "igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year" See data sheet for details ► www.igus.eu/CF210UL
UL/CSA AWM	
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.00863/20
REACH	In accordance with regulation (EC) No. 1907/2006 (REACH)
Lead-free	Following 2011/65/EC (RoHS-II/RoHS-III)
Cleanroom	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
CE	Following 2014/35/EU
UKCA	In accordance with the valid regulations of the United Kingdom (as at 08/2021)

Guaranteed service life (details see page 28-29)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	12.5	13.5	14.5
+15/+60	10	11	12
+60/+70	12.5	13.5	14.5

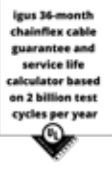
* Higher number of double strokes? Service life calculation online ► www.igus.eu/chainflexlife

Typical application areas

- For medium duty applications, Class 4
- Unsupported travels and up to 10m for gliding applications, Class 2
- Light oil influence, Class 2
- No torsion, Class 1
- Preferably indoor applications, but also outdoor ones at temperatures > 5 °C
- Wood/stone processing, packaging industry, feeding, handling, adjusting devices

Part No.	Number of cores and conductor nominal cross section [mm ²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF210.UL.05.04	(4G0.5)C	7.0	34	63
CF210.UL.15.04	(4G1.5)C	10.0	86	140
CF210.UL.25.04	(4G2.5)C	11.5	146	209
CF210.UL.40.04	(4G4.0)C	13.0	195	288

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core x = without earth core



Example image

igus® chainflex® CF210.UL

Motor cable | PVC | chainflex® CF30

36 10 million Double strokes guaranteed **7.5 x d** Bend radius, e-chain® **100m** Travel distance, e-chain®

- For heavy duty applications
- PVC outer jacket
- Oil-resistant
- Flame-retardant

Dynamic information

Bend radius	e-chain® linear	minimum 7.5 x d
	flexible	minimum 6 x d
	fixed	minimum 4 x d
Temperature	e-chain® linear	+5°C up to +70°C
	flexible	-5°C up to +70°C (following DIN EN 60811-504)
	fixed	-15°C up to +70°C (following DIN EN 50305)
v max.	unsupported	10m/s
	gliding	5m/s
a max.		80m/s ²
Travel distance		Unsupported travels and up to 100m for gliding applications, Class 5
Torsion		Torsion ±90°, with 1m cable length, Class 2

Cable structure

Conductor	Cores <10mm²: Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).
	Cores ≥ 10mm²: Conductor cable consisting of pre-leads (following DIN EN 60228).
Core insulation	Mechanically high-quality, especially low-capacitance XLPE mixture.
Core structure	Cores wound with a short pitch length around a high tensile strength centre element.
Core identification	Black cores with white numbers, one green-yellow core. 1. Core: U / L1 / C / L+ 2. Core: V / L2 3. Core: W / L3 / D / L- 4. Core: 4 / N
Outer jacket	Low-adhesion, oil-resistant PVC mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-4-1). Colour: jet black (similar to RAL 9005)
CFRIP®	Strip cables faster: a tear strip is moulded into the outer jacket Video ► www.igus.eu/CFRIP

Electrical information

Nominal voltage	600/1,000V (following DIN VDE 0298-3) 1,000V (following UL)
Testing voltage	4,000V (following DIN EN 50395)

Basic requirements
Travel distance
Oil resistance
Torsion

low	1	2	3	4	5	6	7	highest
unsupported	1	2	3	4	5	6	≥ 400m	
none	1	2	3	4	highest			
none	1	2	3	4	±360°			

Class 5.5.2.2

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-4-1), Class 2
Flame-retardant	According to IEC 60332-1-2, Cable Flame, VW-1, FT1, FT2 / Horizontal Flame
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL verified	Certificate No. B129699: "igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year"
UL/CSA AWM	See data sheet for details ► www.igus.eu/CF30
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.00863/20
REACH	In accordance with regulation (EC) No. 1907/2006 (REACH)
Lead-free	Following 2011/65/EC (RoHS-II/RoHS-III)
Cleanroom	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 Following 2014/35/EU
CE	
UKCA	In accordance with the valid regulations of the United Kingdom (as at 08/2021)

Guaranteed service life (details see page 28-29)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [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? Service life calculation online ► www.igus.eu/chainflexlife

Typical application areas

- For heavy-duty applications, Class 5
- Unsupported travels and up to 100m for gliding applications, Class 5
- Light oil influence, Class 2
- Torsion ±90°, with 1m cable length, Class 2
- Preferably indoor applications, but also outdoor ones at temperatures > 5 °C
- Storage and retrieval units, machining units/packaging machines, quick handling, indoor cranes



Example image

EPLAN download, configurators ► www.igus.eu/CF30

36-month guarantee ... more than 1,350 cable types from stock ... no cutting charges



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UL-verified chainflex® guarantee ... www.igus.eu/ul-verified

325



igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year



igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year



Motor cable | PVC | chainflex® CF30

Strip cables 50% faster with CFRIP® tear strip



Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF30.15.04	4G1.5	8.0	61	104
CF30.25.04	4G2.5	10.0	100	166
CF30.25.05	5G2.5	11.0	124	203
CF30.40.04	4G4.0	11.5	163	249
CF30.40.05	5G4.0	12.5	204	302
CF30.60.04	4G6.0	13.5	237	343
CF30.60.05	5G6.0	15.0	297	410
CF30.100.04	4G10	16.5	407	548
CF30.100.05	5G10	19.5	515	684
CF30.160.04	4G16	20.0	646	826
CF30.160.05	5G16	23.5	815	1067
CF30.250.04	4G25	25.0	1014	1320
CF30.350.04	4G35	28.5	1439	1795
CF30.500.04 ¹¹⁾	4G50	34.0	2061	2528

¹¹⁾ Phase-out model

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core x = without earth core



Cables available in the chainflex® CASE

Simple savings on delivery, storage space and re-ordering with the chainflex® CASE - ship'n store by igus®.

More on this on page 24/25 and online: www.igus.eu/cf-case



Class 5.5.2.2

Basic requirements
Travel distance
Oil resistance
Torsion

low	1	2	3	4	5	6	7	highest
unsupported	1	2	3	4	5	6	≥ 400m	
none	1	2	3	4	highest			
none	1	2	3	4	±360°			



igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year



Order example: **CF30.15.04** – to your desired length (0.5m steps)
CF30 chainflex® series .15 Code nominal cross section .04 Number of cores

Order online ► www.igus.eu/CF30

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

cost down...



...life up

Reduce cost, improve technology, now!

Do the chainflex® price check ...
www.igus.eu/cf-price-check

... for example: reduce cost with CF885 ...



igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year

Motor cable | PVC | chainflex® CF31

- 36** 10 million Double strokes guaranteed
- 7.5 x d** Bend radius, e-chain®
- 100m** Travel distance, e-chain®

- For heavy duty applications
- PVC outer jacket
- Shielded
- Oil-resistant
- Flame-retardant

Dynamic information

Bend radius	e-chain® linear flexible	minimum 7.5 x d minimum 6 x d
	fixed	minimum 4 x d
Temperature	e-chain® linear flexible	+5°C up to +70°C -5°C up to +70°C (following DIN EN 60811-504)
	fixed	-15°C up to +70°C (following DIN EN 50305)
v max.	unsupported	10m/s
	gliding	5m/s
a max.		80m/s²
Travel distance		Unsupported travels and up to 100m for gliding applications, Class 5

Cable structure

Conductor	Cores <10mm²: Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228). Cores ≥ 10mm²: Conductor cable consisting of pre-leads (following DIN EN 60228).
Core insulation	Mechanically high-quality, especially low-capacitance XLPE mixture.
Core structure	Cores wound with a short pitch length around a high tensile strength centre element.
Core identification	Black cores with white numbers, one green-yellow core. 1. Core: U / L1 / C / L+ 2. Core: V / L2 3. Core: W / L3 / D / L- 4. Core: 4 / N
Inner jacket	PVC mixture adapted to suit the requirements in e-chains®.
Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage linear approx. 70%, optical approx. 90%
Outer jacket	Low-adhesion, oil-resistant PVC mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-4-1). Colour: jet black (similar to RAL 9005)
CFRIP®	Strip cables faster: a tear strip is moulded into the inner jacket Video ► www.igus.eu/CFRIP

Electrical information

Nominal voltage	600/1,000V (following DIN VDE 0298-3) 1,000V (following UL)
Testing voltage	4,000V (following DIN EN 50395)

EPLAN download, configurators ► www.igus.eu/CF31

36-month guarantee ... more than 1,350 cable types from stock ... no cutting charges



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Basic requirements
Travel distance
Oil resistance
Torsion

low	1	2	3	4	5	6	7	highest
unsupported	1	2	3	4	5	6	≥ 400m	
none	1	2	3	4	highest			
none	1	2	3	4	±360°			

Class 5.5.2.1

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-4-1), Class 2
Flame-retardant	According to IEC 60332-1-2, Cable Flame, VW-1, FT1, FT2 / Horizontal Flame
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL verified	Certificate No. B129699: "igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year"
UL/CSA AWM	See data sheet for details ► www.igus.eu/CF31
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.00863/20
REACH	In accordance with regulation (EC) No. 1907/2006 (REACH)
Lead-free	Following 2011/65/EC (RoHS-II/RoHS-III)
Cleanroom	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 Following 2014/35/EU
CE	
UKCA	In accordance with the valid regulations of the United Kingdom (as at 08/2021)

Guaranteed service life (details see page 28-29)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [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? Service life calculation online ► www.igus.eu/chainflexlife

Typical application areas

- For heavy-duty applications, Class 5
- Unsupported travels and up to 100m for gliding applications, Class 5
- Light oil influence, Class 2
- No torsion, Class 1
- Preferably indoor applications, but also outdoor ones at temperatures > 5 °C
- Storage and retrieval units, machining units/packaging machines, quick handling, indoor cranes



igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year



igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year



UL-verified chainflex® guarantee ... www.igus.eu/ul-verified

Motor cable | PVC | chainflex® CF31

Strip cables 50% faster with CFRIP® tear strip



Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF31.15.04	(4G1.5)C	10.0	89	157
CF31.25.04	(4G2.5)C	11.5	133	221
CF31.25.05	(5G2.5)C	13.0	163	271
CF31.40.04	(4G4.0)C	13.0	203	300
CF31.40.05	(5G4.0)C	14.5	258	354
CF31.60.04	(4G6.0)C	16.0	288	455
CF31.60.05	(5G6.0)C	17.0	356	532
CF31.100.04	(4G10)C	18.5	468	670
CF31.100.05	(5G10)C	21.5	609	857
CF31.160.04	(4G16)C	23.0	738	1035
CF31.250.04	(4G25)C	27.5	1153	1586
CF31.350.04	(4G35)C	31.0	1592	2104
CF31.500.04	(4G50)C	36.5	2224	2902
CF31.700.04	(4G70)C	43.0	3203	4173

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core x = without earth core

Order example: **CF31.15.04** – to your desired length (0.5m steps)
CF31 chainflex® series .15 Code nominal cross section .04 Number of cores

Order online ► www.igus.eu/CF31

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.



Cables available in the chainflex® CASE

Simple savings on delivery, storage space and re-ordering with the chainflex® CASE - ship'n store by igus®.

More on this on page 24/25 and online: www.igus.eu/cf-case



Class 5.5.2.1

Basic requirements
Travel distance
Oil resistance
Torsion

low	1	2	3	4	5	6	7	highest
unsupported	1	2	3	4	5	6	≥ 400m	
none	1	2	3	4	highest			
none	1	2	3	4	±360°			

Guarantee
igus chainflex
36
up to 36 months guarantee

igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year



chainflex® CF31 motor cable in a fast picker

CFRIP

UL LISTED

UL US

NEC

NFPA

CUPA

DNV

EAC

REACH

RoHS

clean-room

CE

UK

CA

EPLAN download, configurators ► www.igus.eu/CF31

Guarantee
igus chainflex
36
up to 36 months guarantee

igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year

Motor cable | iguPUR | chainflex® CF895

36 5 million Double strokes guaranteed **15 x d** Bend radius, e-chain® **10m** Travel distance, e-chain®

- For flexing applications
- iguPUR outer jacket
- Oil-resistant
- Flame-retardant

Dynamic information

Bend radius	e-chain® linear flexible	minimum 15 x d minimum 12 x d
	fixed	minimum 8 x d
Temperature	e-chain® linear flexible	-20°C up to +80°C -40°C up to +80°C (following DIN EN 60811-504)
	fixed	-50°C up to +80°C (following DIN EN 50305)
v max.	unsupported	3m/s
a max.		20m/s ²
Travel distance		Unsupported travels up to 10m, Class 1

Cable structure

Conductor	Conductor consisting of bare copper wires (according to DIN EN 60228).
Core insulation	Mechanically high-quality, especially low-capacitance TPE mixture.
Core structure	Cores wound with an optimised pitch length.
Core identification	Black cores with white numbers, one green-yellow core. 1. Core: U / L1 / C / L+ 2. Core: V / L2 3. Core: W / L3 / D / L-
Outer jacket	Low-adhesion iguPUR mixture, adapted to suit the requirements in e-chains®. Colour: Pastel orange (similar to RAL 2003)

Electrical information

Nominal voltage	600/1,000V (following DIN VDE 0298-3) 1,000V (following UL)
Testing voltage	4,000V (following DIN EN 50395)

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3

Basic requirements	low	1	2	3	4	5	6	7	highest
Travel distance	unsupported	1	2	3	4	5	6	≥ 400m	
Oil resistance	none	1	2	3	4	highest			
Torsion	none	1	2	3	4	±360°			

Class 3.1.3.1

Flame-retardant	According to IEC 60332-1-2, Cable Flame, VW-1, FT1, FT2 / Horizontal Flame
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL verified	Certificate No. B129699: "igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year"
UL/CSA AWM	See data sheet for details ► www.igus.eu/CF895
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.00302/19
REACH	In accordance with regulation (EC) No. 1907/2006 (REACH)
Lead-free	Following 2011/65/EC (RoHS-II/RoHS-III)
CE	Following 2014/35/EU
UKCA	In accordance with the valid regulations of the United Kingdom (as at 08/2021)

Guaranteed service life (details see page 28-29)

Double strokes*	1 million	3 million	5 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-20/-10	17.5	18.5	19.5
-10/+70	15	16	17
+70/+80	17.5	18.5	19.5

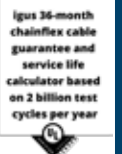
* Higher number of double strokes? Service life calculation online ► www.igus.eu/chainflexlife

Typical application areas

- For flexing applications, Class 3
- Especially for unsupported travels, Class 1
- With influence of oil, Class 3
- No torsion, Class 1
- Indoor and outdoor applications without direct sun radiation
- Machining units/machine tools, low temperature applications

Part No.	Number of cores and conductor nominal cross section [mm ²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF895.15.04	4G1.5	8.0	67	101
CF895.25.04	4G2.5	10.0	110	153
CF895.40.04	4G4.0	11.5	175	239
CF895.60.04	4G6.0	13.5	262	353
CF895.100.04	4G10	17.0	436	543
CF895.160.04	4G16	20.0	653	824

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core x = without earth core



igus® chainflex® CF895

Example image

EPLAN download, configurators ► www.igus.eu/CF895

36-month guarantee ... more than 1,350 cable types from stock ... no cutting charges



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UL-verified chainflex® guarantee ... www.igus.eu/ul-verified

Motor cable | iguPUR | chainflex® CF896

36 5,000,000 Double strokes guaranteed **15 x d** Bend radius, e-chain® **10m** Travel distance, e-chain®

- For flexing applications
- iguPUR outer jacket
- Oil-resistant
- Shielded
- Flame-retardant

Dynamic information

Bend radius	e-chain® linear	minimum 15 x d
	flexible	minimum 12 x d
	fixed	minimum 8 x d
Temperature	e-chain® linear	-20°C up to +80°C
	flexible	-40°C up to +80°C (following DIN EN 60811-504)
	fixed	-50°C up to +80°C (following DIN EN 50305)
v max.	unsupported	3m/s
a max.		20m/s ²
Travel distance		Unsupported travels up to 10m, Class 1

Cable structure

Conductor	Conductor consisting of bare copper wires (according to DIN EN 60228).
Core insulation	Mechanically high-quality, especially low-capacitance TPE mixture.
Core structure	Cores wound with an optimised pitch length.
Core identification	Black cores with white numbers, one green-yellow core. 1. Core: U / L1 / C / L+ 2. Core: V / L2 3. Core: W / L3 / D / L-
Overall shield	Braiding made of tinned copper wires. Coverage approx. 60% optical
Outer jacket	Low-adhesion iguPUR mixture, adapted to suit the requirements in e-chains®. Colour: Pastel orange (similar to RAL 2003)

Electrical information

Nominal voltage	600/1,000V (following DIN VDE 0298-3) 1,000V (following UL)
Testing voltage	4,000V (following DIN EN 50395)

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3

Basic requirements
Travel distance
Oil resistance
Torsion

low	1	2	3	4	5	6	7	highest
unsupported	1	2	3	4	5	6	7	≥ 400m
none	1	2	3	4	highest			
none	1	2	3	4	±360°			

Class 3.1.3.1

- Flame-retardant** According to IEC 60332-1-2, Cable Flame, VW-1, FT1, FT2 / Horizontal Flame
- Silicone-free** Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
- UL verified** Certificate No. B129699: "igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year"
See data sheet for details ► www.igus.eu/CF896
- UL/CSA AWM**
- NFPA** Following NFPA 79-2018, chapter 12.9
- EAC** Certificate No. RU C-DE.ME77.B.00302/19
- REACH** In accordance with regulation (EC) No. 1907/2006 (REACH)
- Lead-free** Following 2011/65/EC (RoHS-II/RoHS-III)
- CE** Following 2014/35/EU
- UKCA** In accordance with the valid regulations of the United Kingdom (as at 08/2021)

Guaranteed service life (details see page 28-29)

Double strokes*	1 million	3 million	5 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-20/-10	17.5	18.5	19.5
-10/+70	15	16	17
+70/+80	17.5	18.5	19.5

* Higher number of double strokes? Service life calculation online ► www.igus.eu/chainflexlife

Typical application areas

- For flexing applications, Class 3
- Especially for unsupported travels, Class 1
- With influence of oil, Class 3
- No torsion, Class 1
- Indoor and outdoor applications without direct sun radiation
- Machining units/machine tools, low temperature applications

Part No.	Number of cores and conductor nominal cross section [mm ²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF896.07.04	(4G0.75)C	7.5	52	79
CF896.15.04	(4G1.5)C	9.0	82	122
CF896.25.04	(4G2.5)C	10.5	132	173
CF896.40.04	(4G4.0)C	12.0	204	257
CF896.60.04	(4G6.0)C	14.5	306	378
CF896.100.04	(4G10)C	18.5	458	653
CF896.160.04	(4G16)C	21.0	709	835

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core x = without earth core



Example image

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36-month guarantee ... more than 1,350 cable types from stock ... no cutting charges



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UL-verified chainflex® guarantee ... www.igus.eu/ul-verified

Motor cable | PUR | chainflex® CF270.UL.D

36 10 million Double strokes guaranteed **10 x d** Bend radius, e-chain® **10m** Travel distance, e-chain®

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

Dynamic information

Bend radius	e-chain® linear flexible	minimum 10 x d
	fixed	minimum 8 x d
Temperature	e-chain® linear flexible	-25°C up to +80°C
	fixed	-40°C up to +80°C (following DIN EN 60811-504)
v max.	unsupported	10m/s
	gliding	2m/s
a max.		50m/s ²
Travel distance		Unsupported travels and up to 10m for gliding applications, Class 2

Cable structure

Conductor	Stranded conductor in bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality, especially low-capacitance XLPE mixture.
Core structure	Cores wound with high tensile strength centre elements.
Core identification	Black cores with white numbers, one green-yellow core. 1. Core: U / L1 / C / L+ 2. Core: V / L2 3. Core: W / L3 / D / L-
Intermediate layer	Foil taping over the outer layer.
Overall shield	Bending-resistant braiding made of tinned copper wires. Coverage linear approx. 55%, optical approx. 80%
Outer jacket	Low-adhesion, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2) Colour: Pastel orange (similar to RAL 2003)

Electrical information

Nominal voltage	600/1,000V (following DIN VDE 0298-3) 1,000V (following UL)
Testing voltage	4,000V (following DIN EN 50395)

Example image

EPLAN download, configurators ► www.igus.eu/CF270ULD

36-month guarantee ... more than 1,350 cable types from stock ... no cutting charges



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Basic requirements
Travel distance
Oil resistance
Torsion

low	1	2	3	4	5	6	7	highest
unsupported	1	2	3	4	5	6	≥ 400m	
none	1	2	3	4	highest			
none	1	2	3	4	±360°			

Class 4.2.3.1

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Offshore	MUD-resistant following NEK 606 - status 2016
Flame-retardant	According to IEC 60332-1-2, Cable Flame, VW-1, FT1, FT2 / Horizontal Flame
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
UL verified	Certificate No. B129699: "igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year"
UL/CSA AWM	See data sheet for details ► www.igus.eu/CF270ULD
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.00863/20
REACH	In accordance with regulation (EC) No. 1907/2006 (REACH)
Lead-free	Following 2011/65/EC (RoHS-II/RoHS-III)
Cleanroom	According to ISO Class 1. The outer jacket material of this series complies with CF77.UL.05.12.D - tested by IPA according to standard DIN EN ISO 14644-1
DESINA	According to VDW, DESINA standardisation
CE	Following 2014/35/EU
UK CA	In accordance with the valid regulations of the United Kingdom (as at 08/2021)

Guaranteed service life (details see page 28-29)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-25/-15	12.5	13.5	14.5
-15/+70	10	11	12
+70/+80	12.5	13.5	14.5

* Higher number of double strokes? Service life calculation online ► www.igus.eu/chainflexlife

Typical application areas

- For medium duty applications, Class 4
- Unsupported travels and up to 10m for gliding applications, Class 2
- Almost unlimited resistance to oil, Class 3
- No torsion, Class 1
- Indoor and outdoor applications without direct sun radiation
- Machining units/machine tools, low temperature applications

Guarantee igus chainflex
36
up to 36 months guarantee

igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year

Guarantee igus chainflex
36
up to 36 months guarantee

igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year





Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF270.UL.07.04.D	(4G0.75)C	8.0	47	81
CF270.UL.10.06.D	(6G1.0)C	9.5	87	133
CF270.UL.15.04.D	(4G1.5)C	9.0	78	116
CF270.UL.25.04.D	(4G2.5)C	10.5	129	173
CF270.UL.40.04.D	(4G4.0)C	12.5	193	255
CF270.UL.60.04.D	(4G6.0)C	14.5	297	356
CF270.UL.100.04.D	(4G10)C	17.0	495	551
CF270.UL.160.04.D	(4G16)C	20.5	755	819
CF270.UL.250.04.D	(4G25)C	25.0	1117	1256
CF270.UL.350.04.D	(4G35)C	28.0	1597	1696

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core x = without earth core

Order example: **CF270.UL.07.04.D** – to your desired length (0.5m steps)
CF270.UL.D chainflex® series .07 Code nominal cross section .04 Number of cores

Order online ► www.igus.eu/CF270ULD

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.



Cables available in the chainflex® CASE

Simple savings on delivery, storage space and re-ordering with the chainflex® CASE - ship'n store by igus®.

More on this on page 24/25 and online: www.igus.eu/cf-case



cost down...



...life up

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... for example: reduce cost with CF31 ...



chainflex® CF270.UL.D motor cable in a system for sharpening knives



igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year



igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year

Motor cable | PUR | chainflex® CF27.D

36 10 million Double strokes guaranteed **7.5 x d** Bend radius, e-chain® **100m** Travel distance, e-chain®

- For extremely heavy duty applications
- PUR outer jacket
- Shielded
- Oil-resistant and coolant-resistant
- Notch-resistant
- Flame-retardant
- Hydrolysis and microbe-resistant
- PVC and halogen-free

Dynamic information

Bend radius	e-chain® linear	minimum 7.5 x d
	flexible	minimum 6 x d
	fixed	minimum 4 x d
Temperature	e-chain® linear	-25°C up to +80°C
	flexible	-40°C up to +80°C (following DIN EN 60811-504)
	fixed	-50°C up to +80°C (following DIN EN 50305)
v max.	unsupported	10m/s
	gliding	5m/s
a max.		80m/s ²
Travel distance		Unsupported travels and up to 100m for gliding applications, Class 5

Cable structure

Conductor	Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality, especially low-capacitance XLPE mixture.
Core structure	Cores wound around a high tensile strength centre element.
Core identification	Black cores with white numbers, one green-yellow core. 1. Core: U / L1 / C / L+ 2. Core: V / L2 3. Core: W / L3 / D / L-
Inner jacket	TPE mixture adapted to suit the requirements in e-chains®.
Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage linear approx. 70%, optical approx. 90%
Outer jacket	Low-adhesion, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2) Colour: Pastel orange (similar to RAL 2003)
CFRIP®	Strip cables faster: a tear strip is moulded into the inner jacket Video ► www.igus.eu/CFRIP

Electrical information

Nominal voltage	600/1,000V (following DIN VDE 0298-3) 1,000V (following UL)
Testing voltage	4,000V (following DIN EN 50395)

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3

Basic requirements	low	1	2	3	4	5	6	7	highest
Travel distance	unsupported	1	2	3	4	5	6	≥ 400m	
Oil resistance	none	1	2	3	4	highest			
Torsion	none	1	2	3	4	±360°			

Class 6.5.3.1

Offshore	MUD-resistant following NEK 606 - status 2016
Flame-retardant	According to IEC 60332-1-2, Cable Flame, VW-1, FT1, FT2 / Horizontal Flame
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
UL verified	Certificate No. B129699: "igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year"
UL/CSA AWM	See data sheet for details ► www.igus.eu/CF27D
NFPA	Following NFPA 79-2018, chapter 12.9
DNV	Type Approval Certificate TAE00003XA
EAC	Certificate No. RU C-DE.ME77.B.00863/20
REACH	In accordance with regulation (EC) No. 1907/2006 (REACH)
Lead-free	Following 2011/65/EC (RoHS-II/RoHS-III)
Cleanroom	According to ISO Class 1. The outer jacket material of this series complies with CF77.UL.05.12.D - tested by IPA according to standard DIN EN ISO 14644-1
DESINA	According to VDW, DESINA standardisation
CE	Following 2014/35/EU
UKCA	In accordance with the valid regulations of the United Kingdom (as at 08/2021)

Guaranteed service life (details see page 28-29)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-25/-15	10	11	12
-15/+70	7.5	8.5	9.5
+70/+80	10	11	12

* Higher number of double strokes? Service life calculation online ► www.igus.eu/chainflexlife

Typical application areas

- For heavy-duty applications, Class 6
- Unsupported travels and up to 100m for gliding applications, Class 5
- Almost unlimited resistance to oil, Class 3
- No torsion, Class 1
- Indoor and outdoor applications, UV-resistant
- Storage and retrieval units for high-bay warehouses, machining units/machine tools, quick handling, cleanroom, semiconductor insertion, outdoor cranes, low-temperature applications

Guarantee igus chainflex **36** up to 36 months guarantee

igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year

Guarantee igus chainflex **36** up to 36 months guarantee

igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year

CFRIP

UL LISTED

UL US

NEC

NFPA

CUPA

DNV

EAC

REACH

RoHS

Clean-room

DESINA

CE

UKCA

Example image

igus® chainflex® CF27.D

Motor cable | PUR | chainflex® CF27.D

Strip cables 50% faster with CFRIP® tear strip

igus® chainflex® CF27.D

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF27.07.04.D	(4G0.75)C	9.5	55	115
CF27.15.04.D	(4G1.5)C	11.0	90	165
CF27.25.04.D	(4G2.5)C	12.5	135	231
CF27.500.04.D	(4G50)C	37.0	2244	2817

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core x = without earth core



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Class 6.5.3.1

Basic requirements
Travel distance
Oil resistance
Torsion

low	1	2	3	4	5	6	7	highest
unsupported	1	2	3	4	5	6	≥ 400m	
none	1	2	3	4	highest			
none	1	2	3	4	±360°			

Order example: **CF27.07.04.D** – to your desired length (0.5m steps)
CF27.D chainflex® series .07 Code nominal cross section .04 Number of cores

Order online ► www.igus.eu/CF27D

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

cost down...



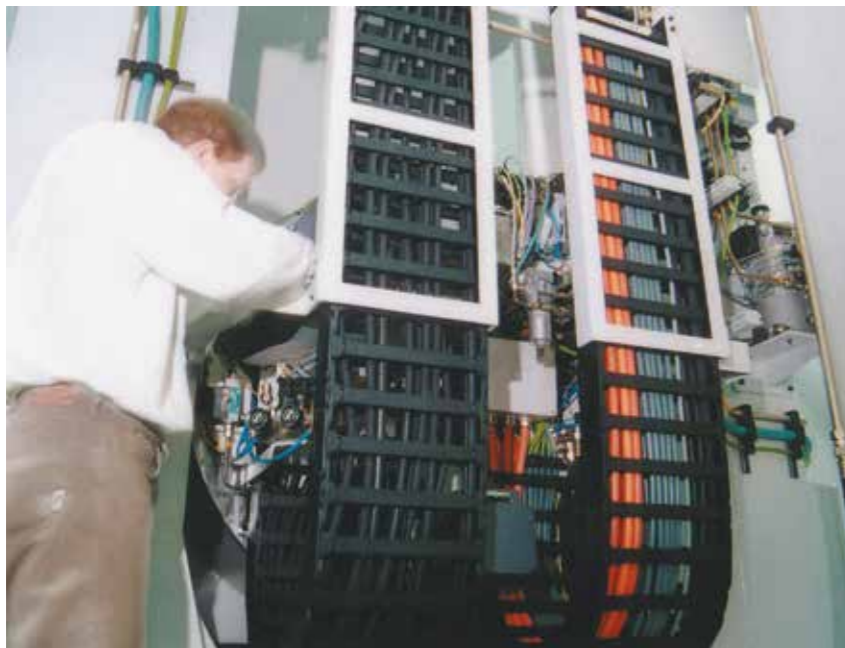
...life up

Reduce cost, improve technology, now!

Do the chainflex® price check ...

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... here's an idea for you: highest abrasion resistance with CF38 ...



Modular design, easy to retrofit: igus® E4 e-chain® and chainflex® cables.

EPLAN download, configurators ► www.igus.eu/CF27D



igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year



igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year



low	1	2	3	4	5	6	7	highest
unsupported	1	2	3	4	5	6	≥ 400m	
none	1	2	3	4	highest			
none	1	2	3	4	±360°			

Motor cable | TPE | chainflex® CF34.UL.D

36 10 million Double strokes guaranteed **7.5 x d** Bend radius, e-chain® **400m** Travel distance, e-chain®

- For extremely heavy duty applications
- TPE outer jacket
- Oil and bio-oil-resistant
- Flame-retardant
- UV-resistant
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	e-chain® linear flexible	minimum 7.5 x d
	fixed	minimum 6 x d
	e-chain® linear flexible	minimum 4 x d
Temperature	e-chain® linear flexible	-35°C up to +90°C
	fixed	-45°C up to +90°C (following DIN EN 60811-504)
	fixed	-50°C up to +90°C (following DIN EN 50305)
v max.	unsupported	10m/s
	gliding	6m/s
a max.		80m/s ²
Travel distance		Unsupported travels and up to 400m and more for gliding applications, Class 6
Torsion		Torsion ±90°, with 1m cable length, Class 2

Cable structure

Conductor	Cores <10mm²: Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).
	Cores ≥ 10mm²: Conductor cable consisting of pre-leads (following DIN EN 60228).
Core insulation	Mechanically high-quality, especially low-capacitance XLPE mixture.
Core structure	Cores wound with a short pitch length around a high tensile strength centre element.
Core identification	Black cores with white numbers, one green-yellow core. 1. Core: U / L1 / C / L+ 2. Core: V / L2 3. Core: W / L3 / D / L- 4. Core: 4 / N
Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Signal black (similar to RAL 9004)
CFRIP®	Strip cables faster: a tear strip is moulded into the outer jacket Video ► www.igus.eu/CFRIP

Electrical information

Nominal voltage	600/1,000V (following DIN VDE 0298-3) 1,000V (following UL)
Testing voltage	4,000V (following DIN EN 50395)

Class 6.6.4.2

Properties and approvals

UV resistance	High
Oil resistance	Oil-resistant (following DIN EN 60811-404), bio-oil-resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Flame-retardant	According to IEC 60332-1-2, Cable Flame, VW-1, FT1, FT2 / Horizontal Flame
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL verified	Certificate No. B129699: "igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year"
UL/CSA AWM	See data sheet for details ► www.igus.eu/CF34ULD
NFPA	Following NFPA 79-2018, chapter 12.9
DNV	Type Approval Certificate TAE00003X9
EAC	Certificate No. RU C-DE.ME77.B.00863/20
REACH	In accordance with regulation (EC) No. 1907/2006 (REACH)
Lead-free	Following 2011/65/EC (RoHS-II/RoHS-III)
Cleanroom	According to ISO Class 1, material/cable tested by IPA according to DIN EN ISO standard 14644-1
DESINA	According to VDW, DESINA standardisation
CE	Following 2014/35/EU
UK CA	In accordance with the valid regulations of the United Kingdom (as at 08/2021)

Guaranteed service life (details see page 28-29)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	10	11	12
-25/+80	7.5	8.5	9.5
+80/+90	10	11	12

* Higher number of double strokes? Service life calculation online ► www.igus.eu/chainflexlife

Typical application areas

- For heavy-duty applications, Class 6
- Unsupported travels and up to 400m and more for gliding applications, Class 6
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- Torsion ±90°, with 1m cable length, Class 2
- Indoor and outdoor applications, UV-resistant
- Storage and retrieval units for high-bay warehouses, machining units/machine tools, quick handling, cleanroom, semiconductor insertion, outdoor cranes, low-temperature applications

Guarantee igus chainflex
36
up to 36 months guarantee

igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year

Guarantee igus chainflex
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up to 36 months guarantee

igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year

CFRIP

UL LISTED

UL US

NEC

NFPA

CUA

DNV

EAC

REACH

RoHS

Cleanroom

DESINA

CE

UK CA

Example image

EPLAN download, configurators ► www.igus.eu/CF34ULD

36-month guarantee ... more than 1,350 cable types from stock ... no cutting charges



EU2023

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UL-verified chainflex® guarantee ... www.igus.eu/ul-verified

UL

Motor cable | TPE | chainflex® CF34.UL.D

Strip cables 50% faster with CFRIP® tear strip



Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF34.UL.15.04.D	4G1.5	8.0	61	102
CF34.UL.25.04.D	4G2.5	10.0	100	159
CF34.UL.40.04.D	4G4.0	11.5	163	236
CF34.UL.60.04.D	4G6.0	13.5	237	332
CF34.UL.60.05.D	5G6.0	15.0	297	406
CF34.UL.100.04.D	4G10	16.5	407	537
CF34.UL.100.05.D	5G10	19.5	515	670
CF34.UL.160.04.D	4G16	20.0	646	819
CF34.UL.160.05.D	5G16	22.5	815	1009
CF34.UL.250.04.D	4G25	24.5	1014	1271

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core x = without earth core



Cables available in the chainflex® CASE

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Class 6.6.4.2

Basic requirements
Travel distance
Oil resistance
Torsion

low	1	2	3	4	5	6	7	highest
unsupported	1	2	3	4	5	6	7	≥ 400m
none	1	2	3	4	5	6	7	highest
none	1	2	3	4	5	6	7	±360°

Order example: **CF34.UL.15.04.D** - to your desired length (0.5m steps)
CF34.UL.D chainflex® series .15 Code nominal cross section .04 Number of cores

Order online ► www.igus.eu/CF34ULD

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

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Do the chainflex® price check ...
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... for example: reduce cost with CF300.UL.D ...

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igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year

Motor cable | TPE | chainflex® CF35.UL

36 10 million Double strokes guaranteed **7.5 x d** Bend radius, e-chain® **400m** Travel distance, e-chain®

- For extremely heavy duty applications
- TPE outer jacket
- Shielded
- Oil and bio-oil-resistant
- Flame-retardant
- UV-resistant
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	e-chain® linear	minimum 7.5 x d
	flexible	minimum 6 x d
	fixed	minimum 4 x d
Temperature	e-chain® linear	-35°C up to +90°C
	flexible	-45°C up to +90°C (following DIN EN 60811-504)
	fixed	-50°C up to +90°C (following DIN EN 50305)
v max.	unsupported	10m/s
	gliding	6m/s
a max.		80m/s²
Travel distance		Unsupported travels and up to 400m and more for gliding applications, Class 6

Cable structure

Conductor	Cores <10mm²: Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).
	Cores ≥ 10mm²: Conductor cable consisting of pre-leads (following DIN EN 60228).
Core insulation	Mechanically high-quality, especially low-capacitance XLPE mixture.
Core structure	Cores wound with a short pitch length around a high tensile strength centre element.
Core identification	Black cores with white numbers, one green-yellow core. 1. Core: U / L1 / C / L+ 2. Core: V / L2 3. Core: W / L3 / D / L- 4. Core: 4 / N
Inner jacket	TPE mixture adapted to suit the requirements in e-chains®.
Overall shield	Extremely bending-resistant 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®. Colour: Signal black (similar to RAL 9004)
CFRIP®	Strip cables faster: a tear strip is moulded into the inner jacket Video ► www.igus.eu/CFRIP

Electrical information

Nominal voltage	600/1,000V (following DIN VDE 0298-3) 1,000V (following UL)
Testing voltage	4,000V (following DIN EN 50395)

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36-month guarantee ... more than 1,350 cable types from stock ... no cutting charges



EU2023

EU2023



Basic requirements
Travel distance
Oil resistance
Torsion

low	1	2	3	4	5	6	7	highest
unsupported	1	2	3	4	5	6	≥ 400m	
none	1	2	3	4	highest			
none	1	2	3	4	±360°			

Class 6.6.4.1

Properties and approvals

UV resistance	High
Oil resistance	Oil-resistant (following DIN EN 60811-404), bio-oil-resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Flame-retardant	According to IEC 60332-1-2, Cable Flame, VW-1, FT1, FT2 / Horizontal Flame
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL verified	Certificate No. B129699: "igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year"
UL/CSA AWM	See data sheet for details ► www.igus.eu/CF35UL
NFPA	Following NFPA 79-2018, chapter 12.9
DNV	Type Approval Certificate TAE00003X9
EAC	Certificate No. RU C-DE.ME77.B.00863/20
REACH	In accordance with regulation (EC) No. 1907/2006 (REACH)
RoHS	Following 2011/65/EC (RoHS-II/RoHS-III)
Cleanroom	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
CE	Following 2014/35/EU
UK CA	In accordance with the valid regulations of the United Kingdom (as at 08/2021)

Guaranteed service life (details see page 28-29)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	10	11	12
-25/+80	7.5	8.5	9.5
+80/+90	10	11	12

* Higher number of double strokes? Service life calculation online ► www.igus.eu/chainflexlife

Typical application areas

- For heavy-duty applications, Class 6
- Unsupported travels and up to 400m and more for gliding applications, Class 6
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- No torsion, Class 1
- Indoor and outdoor applications, UV-resistant
- Storage and retrieval units for high-bay warehouses, machining units/machine tools, quick handling, cleanroom, semiconductor insertion, outdoor cranes, low-temperature applications

Guarantee igus chainflex
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up to 36 months guarantee

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Guarantee igus chainflex
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CFRIP

UL LISTED

UL US

NEC

NFPA

CE

DNV

EAC

REACH

RoHS

Cleanroom

UL

CE

UK CA

UL-verified chainflex® guarantee ... www.igus.eu/ul-verified

Motor cable | TPE | chainflex® CF35.UL

Strip cables 50% faster with CFRIP® tear strip

igus® chainflex® CF35.UL

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF35.UL.05.04	(4G0.5)C	7.5	42	79
CF35.UL.07.04	(4G0.75)C	8.0	58	90
CF35.UL.15.04	(4G1.5)C	10.0	89	146
CF35.UL.25.04	(4G2.5)C	11.5	133	207
CF35.UL.40.04	(4G4.0)C	13.0	203	290
CF35.UL.60.04	(4G6.0)C	16.0	288	423
CF35.UL.100.04	(4G10)C	18.5	468	632
CF35.UL.160.04	(4G16)C	23.0	738	974
CF35.UL.250.04	(4G25)C	27.5	1153	1481
CF35.UL.60.03.O.PE ¹¹⁾	(3x6.0)C	14.5	229	344
CF35.UL.250.03.O.PE ¹¹⁾	(3x25)C	24.5	880	1163

¹¹⁾ Phase-out model

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core x = without earth core



Cables available in the chainflex® CASE

Simple savings on delivery, storage space and re-ordering with the chainflex® CASE - ship'n store by igus®.

More on this on page 24/25 and online: www.igus.eu/cf-case



Class 6.6.4.1

Basic requirements
Travel distance
Oil resistance
Torsion

low	1	2	3	4	5	6	7	highest
unsupported	1	2	3	4	5	6	≥ 400m	
none	1	2	3	4	highest			
none	1	2	3	4	±360°			

Guarantee igus chainflex
36
up to 36 months guarantee

igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year

Order example: **CF35.UL.05.04** - to your desired length (0.5m steps)
CF35.UL chainflex® series .05 Code nominal cross section .04 Number of cores

Order online ► www.igus.eu/CF35UL

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

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www.igus.eu/cf-price-check

... for example: reduce cost with CF310.UL ...



EPLAN download, configurators ► www.igus.eu/CF35UL

Motor cable | TPE | chainflex® CF37.D



12.5 million
Double strokes guaranteed



7.5 x d
Bend radius, e-chain®



400m
Travel distance, e-chain®

- For heaviest duty applications
- TPE outer jacket
- Oil and bio-oil-resistant
- PVC and halogen-free
- UV-resistant
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	e-chain® linear flexible	minimum 7.5 x d
	fixed	minimum 6 x d
Temperature	e-chain® linear flexible	-35°C up to +90°C
	fixed	-50°C up to +90°C (following DIN EN 60811-504)
v max.	unsupported	10m/s
a max.	gliding	6m/s
Travel distance	Unsupported travels and up to 400m and more for gliding applications, Class 6	
Torsion	Torsion ±90°, with 1m cable length, Class 2	

Cable structure

Conductor	Cores <10mm²: Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).
	Cores ≥ 10mm²: Conductor cable consisting of pre-leads (following DIN EN 60228).
Core insulation	Mechanically high-quality, especially low-capacitance XLPE mixture.
Core structure	Cores wound with a short pitch length around a high tensile strength centre element.
Core identification	Black cores with white numbers, one green-yellow core. 1. Core: U / L1 / C / L+ 2. Core: V / L2 3. Core: W / L3 / D / L- 4. Core: 4 / N
Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: jet black (similar to RAL 9005)
CFRIP®	Strip cables faster: a tear strip is moulded into the outer jacket Video ► www.igus.eu/CFRIP

Electrical information

Nominal voltage	600/1,000V (following DIN VDE 0298-3) 1,000V (following UL)
Testing voltage	4,000V (following DIN EN 50395)

Properties and approvals

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

Basic requirements
Travel distance
Oil resistance
Torsion

low	1	2	3	4	5	6	7	highest
unsupported	1	2	3	4	5	6	≥ 400m	
none	1	2	3	4	highest			
none	1	2	3	4	±360°			

Class 7.6.4.2

Halogen-free	Following DIN EN 60754
UL verified	Certificate No. B129699: "igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year"
UL AWM	See data sheet for details ► www.igus.eu/CF37D
EAC	Certificate No. RU C-DE.ME77.B.00863/20
REACH	In accordance with regulation (EC) No. 1907/2006 (REACH)
Lead-free	Following 2011/65/EC (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	Following 2014/35/EU
UKCA	In accordance with the valid regulations of the United Kingdom (as at 08/2021)

Guaranteed service life (details see page 28-29)

Double strokes*	5 million	7.5 million	12.5 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	10	11	12
-25/+80	7.5	8.5	9.5
+80/+90	10	11	12

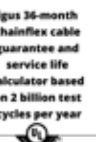
* Higher number of double strokes? Service life calculation online ► www.igus.eu/chainflexlife

Typical application areas

- For heavy-duty applications, Class 7
- Unsupported travels and up to 400m and more for gliding applications, Class 6
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- Torsion ±90°, with 1m cable length, Class 2
- Indoor and outdoor applications, UV-resistant
- Storage and retrieval units for high-bay warehouses, machining units/machine tools, quick handling, cleanroom, semiconductor insertion, outdoor cranes, low-temperature applications

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF37.15.04.D	4G1.5	8.0	61	95
CF37.25.04.D	4G2.5	10.0	100	149
CF37.40.04.D	4G4.0	11.5	163	221
CF37.60.04.D	4G6.0	13.5	237	317
CF37.60.05.D	5G6.0	15.0	297	387
CF37.100.04.D	4G10	16.5	407	503
CF37.100.05.D	5G10	19.0	515	634
CF37.160.04.D	4G16	20.0	646	773
CF37.160.05.D	5G16	22.5	815	963
CF37.250.04.D	4G25	24.0	1014	1203
CF37.500.03.O.PE.D ¹⁾	3x50	30.0	1530	1826

¹⁾ Phase-out model **Note:** The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core x = without earth core



Motor cable | TPE | chainflex® CF38



12.5 million
Double strokes guaranteed



7.5 x d
Bend radius, e-chain®



400m
Travel distance, e-chain®

- For heaviest duty applications
- TPE outer jacket
- Shielded
- Oil and bio-oil-resistant
- PVC and halogen-free
- UV-resistant
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	e-chain® linear	minimum 7.5 x d
	flexible	minimum 6 x d
	fixed	minimum 4 x d
Temperature	e-chain® linear	-35°C up to +90°C
	flexible	-50°C up to +90°C (following DIN EN 60811-504)
	fixed	-55°C up to +90°C (following DIN EN 50305)
v max.	unsupported	10m/s
a max.	gliding	6m/s
Travel distance	Unsupported travels and up to 400m and more for gliding applications, Class 6	

Cable structure

Conductor	Cores <10mm²: Stranded conductor in especially bending-resistant version consisting of bare copper wires (following DIN EN 60228).
	Cores ≥ 10mm²: Conductor cable consisting of pre-leads (following DIN EN 60228).
Core insulation	Mechanically high-quality, especially low-capacitance XLPE mixture.
Core structure	Cores wound with a short pitch length around a high tensile strength centre element.
Core identification	Black cores with white numbers, one green-yellow core. 1. Core: U / L1 / C / L+ 2. Core: V / L2 3. Core: W / L3 / D / L- 4. Core: 4 / N
Inner jacket	TPE mixture adapted to suit the requirements in e-chains®.
Overall shield	Extremely bending-resistant 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®. Colour: jet black (similar to RAL 9005)
CFRIP®	Strip cables faster: a tear strip is moulded into the inner jacket Video ► www.igus.eu/CFRIP

Electrical information

Nominal voltage	600/1,000V (following DIN VDE 0298-3) 1,000V (following UL)
Testing voltage	4,000V (following DIN EN 50395)

Properties and approvals

UV resistance	High
Oil resistance	Oil-resistant (following DIN EN 60811-404), bio-oil-resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4

Basic requirements
Travel distance
Oil resistance
Torsion

low	1	2	3	4	5	6	7	highest
unsupported	1	2	3	4	5	6	≥ 400m	
none	1	2	3	4	highest			
none	1	2	3	4	±360°			

Class 7.6.4.1

Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
UL verified	Certificate No. B129699: "igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year"
UL AWM	See data sheet for details ► www.igus.eu/CF38
EAC	Certificate No. RU C-DE.ME77.B.00863/20
REACH	In accordance with regulation (EC) No. 1907/2006 (REACH)
Lead-free	Following 2011/65/EC (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
CE	Following 2014/35/EU
UKCA	In accordance with the valid regulations of the United Kingdom (as at 08/2021)

Guaranteed service life (details see page 28-29)

Double strokes*	5 million	7.5 million	12.5 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	10	11	12
-25/+80	7.5	8.5	9.5
+80/+90	10	11	12

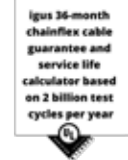
* Higher number of double strokes? Service life calculation online ► www.igus.eu/chainflexlife

Typical application areas

- For heavy-duty applications, Class 7
- Unsupported travels and up to 400m and more for gliding applications, Class 6
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- No torsion, Class 1
- Indoor and outdoor applications, UV-resistant
- Storage and retrieval units for high-bay warehouses, machining units/machine tools, quick handling, cleanroom, semiconductor insertion, outdoor cranes, low-temperature applications

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF38.15.04	(4G1.5)C	10.0	89	140
CF38.25.04	(4G2.5)C	11.5	133	198
CF38.40.04	(4G4.0)C	13.0	203	280
CF38.60.04	(4G6.0)C	16.0	288	409
CF38.100.04	(4G10)C	18.5	468	613
CF38.160.04	(4G16)C	23.0	738	943
CF38.250.04	(4G25)C	27.0	1153	1432
CF38.100.03.O.PE	(3x10)C	17.0	358	494
CF38.160.03.O.PE	(3x16)C	20.5	565	762
CF38.500.03.O.PE	(3x50)C	33.0	1714	2129

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core x = without earth core








Spindle cable/Single core | PVC | chainflex® CF885




- 36** 5,000,000 Double strokes guaranteed
- 15 x d** Bend radius, e-chain®
- 10m** Travel distance, e-chain®

- For flexing applications
- PVC outer jacket
- Flame-retardant



Dynamic information

 Bend radius	e-chain® linear	minimum 15 x d
	flexible	minimum 12 x d
	fixed	minimum 8 x d
 Temperature	e-chain® linear	+5°C up to +70°C
	flexible	-5°C up to +70°C (following DIN EN 60811-504)
	fixed	-15°C up to +70°C (following DIN EN 50305)
 v max.	unsupported	3m/s
 a max.		20m/s²
 Travel distance		Unsupported travels up to 10m, Class 1








Cable structure

 Conductor	Conductor consisting of bare copper wires (according to DIN EN 60228).
 Core insulation	Mechanically high-quality PVC mixture.
 Outer jacket	Low-adhesion PVC mixture, adapted to suit the requirements in e-chains®. Colour: Pastel orange (similar to RAL 2003)

Electrical information

 Nominal voltage	600/1,000V (following DIN VDE 0298-3) 600V (following UL)
 Testing voltage	4,000V (following DIN EN 50395)

Properties and approvals

 Flame-retardant	According to IEC 60332-1-2, Cable Flame, VW-1, FT1, FT2 / Horizontal Flame
 Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
 UL verified	Certificate No. B129699: "igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year"
 UL/CSA AWM	See data sheet for details ► www.igus.eu/CF885
 NFPA	Following NFPA 79-2018, chapter 12.9
 EAC	Certificate No. RU C-DE.ME77.B.00302/19
 REACH	In accordance with regulation (EC) No. 1907/2006 (REACH)

EPLAN download, configurators ► www.igus.eu/CF885

36-month guarantee ... more than 1,350 cable types from stock ... no cutting charges



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Basic requirements
Travel distance
Oil resistance
Torsion

low	1	2	3	4	5	6	7	highest
unsupported	1	2	3	4	5	6	≥ 400m	
none	1	2	3	4	highest			
none	1	2	3	4	±360°			

Class 3.1.1.1

-  **Lead-free** Following 2011/65/EC (RoHS-II/RoHS-III)
-  **CE** Following 2014/35/EU
-  **UKCA** In accordance with the valid regulations of the United Kingdom (as at 08/2021)

Guaranteed service life (details see page 28-29)

Double strokes*	1 million	3 million	5 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	17.5	18.5	19.5
+15/+60	15	16	17
+60/+70	17.5	18.5	19.5

* Higher number of double strokes? Service life calculation online ► www.igus.eu/chainflexlife

Typical application areas

- For flexing applications, Class 3
- Especially for unsupported travels, Class 1
- Without influence of oil, Class 1
- No torsion, Class 1
- Preferably indoor applications
- Wood/stone processing, packaging industry, feeding, handling, adjusting devices

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF885.40.01	1x4.0	7.5	41	78
CF885.60.01	1x6.0	8.0	61	100
CF885.100.01	1x10	9.5	100	157
CF885.160.01	1x16	11.5	159	237
CF885.250.01	1x25	12.5	248	325
CF885.350.01	1x35	15.0	347	474
CF885.500.01	1x50	16.5	495	644
CF885.700.01	1x70	18.5	686	844
CF885.950.01	1x95	20.5	931	1024

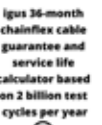
Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core x = without earth core



Cables available in the chainflex® CASE

Simple savings on delivery, storage space and re-ordering with the chainflex® CASE - ship'n store by igus®.

More on this on page 24/25 and online: www.igus.eu/cf-case



Spindle cable/Single core | PVC | chainflex® CF885.PE

36 5,000,000 Double strokes guaranteed **15 x d** Bend radius, e-chain® **10m** Travel distance, e-chain®

- For flexing applications
- PVC outer jacket
- Flame-retardant

Dynamic information

	Bend radius	e-chain® linear flexible	minimum 15 x d minimum 12 x d
		fixed	minimum 8 x d
	Temperature	e-chain® linear flexible	+5°C up to +70°C -5°C up to +70°C (following DIN EN 60811-504)
		fixed	-15°C up to +70°C (following DIN EN 50305)
	v max.	unsupported	3m/s
	a max.		20m/s²
	Travel distance		Unsupported travels up to 10m, Class 1

Cable structure

	Conductor	Conductor consisting of bare copper wires (according to DIN EN 60228).
	Core insulation	Mechanically high-quality PVC mixture.
	Core identification	Green-yellow
	Outer jacket	Low-adhesion PVC mixture, adapted to suit the requirements in e-chains®. Colour: Pastel orange (similar to RAL 2003)

Electrical information

	Nominal voltage	600/1,000V (following DIN VDE 0298-3) 600V (following UL)
	Testing voltage	4,000V (following DIN EN 50395)

Properties and approvals

	Flame-retardant	According to IEC 60332-1-2, Cable Flame, VW-1, FT1, FT2 / Horizontal Flame
	Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
	UL verified	Certificate No. B129699: "igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year"
	UL/CSA AWM	See data sheet for details ► www.igus.eu/CF885PE
	NFPA	Following NFPA 79-2018, chapter 12.9

EPLAN download, configurators ► www.igus.eu/CF885PE

36-month guarantee ... more than 1,350 cable types from stock ... no cutting charges



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Basic requirements	low	1	2	3	4	5	6	7	highest
Travel distance	unsupported	1	2	3	4	5	6	≥ 400m	
Oil resistance	none	1	2	3	4	highest			
Torsion	none	1	2	3	4	±360°			

Class 3.1.1.1

	EAC	Certificate No. RU C-DE.ME77.B.00302/19
	REACH	In accordance with regulation (EC) No. 1907/2006 (REACH)
	Lead-free	Following 2011/65/EC (RoHS-II/RoHS-III)
	CE	Following 2014/35/EU
	UKCA	In accordance with the valid regulations of the United Kingdom (as at 08/2021)

Guaranteed service life (details see page 28-29)

Double strokes*	1 million	3 million	5 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	17.5	18.5	19.5
+15/+60	15	16	17
+60/+70	17.5	18.5	19.5

* Higher number of double strokes? Service life calculation online ► www.igus.eu/chainflexlife

Typical application areas

- For flexing applications, Class 3
- Especially for unsupported travels, Class 1
- Without influence of oil, Class 1
- No torsion, Class 1
- Preferably indoor applications
- Wood/stone processing, packaging industry, feeding, handling, adjusting devices

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF885.PE.25.01	1G2.5	6.5	25	59
CF885.PE.40.01	1G4.0	7.5	61	83
CF885.PE.60.01	1G6.0	8.0	61	100
CF885.PE.100.01	1G10	9.5	100	155
CF885.PE.160.01	1G16	11.0	159	226
CF885.PE.250.01	1G25	12.5	248	342

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core x = without earth core



Cables available in the chainflex® CASE

Simple savings on delivery, storage space and re-ordering with the chainflex® CASE - ship'n store by igus®.

More on this on page 24/25 and online: www.igus.eu/cf-case



igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year



igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year



Example image

igus® chainflex® CF885.PE

Spindle cable/Single core | PVC | chainflex® CF886

36 5,000,000 Double strokes guaranteed **15 x d** Bend radius, e-chain® **10m** Travel distance, e-chain®

- For flexing applications
- PVC outer jacket
- Shielded
- Flame-retardant

Dynamic information

Bend radius	e-chain® linear flexible	minimum 15 x d minimum 12 x d
	fixed	minimum 8 x d
Temperature	e-chain® linear flexible	+5°C up to +70°C -5°C up to +70°C (following DIN EN 60811-504)
	fixed	-15°C up to +70°C (following DIN EN 50305)
v max.	unsupported	3m/s
a max.		20m/s ²
Travel distance		Unsupported travels up to 10m, Class 1

Cable structure

Conductor	Conductor consisting of bare copper wires (according to DIN EN 60228).
Core insulation	Mechanically high-quality PVC mixture.
Overall shield	Braiding made of tinned copper wires. Coverage approx. 60% optical
Outer jacket	Low-adhesion PVC mixture, adapted to suit the requirements in e-chains®. Colour: Pastel orange (similar to RAL 2003)

Electrical information

Nominal voltage	600/1,000V (following DIN VDE 0298-3) 600V (following UL)
Testing voltage	4,000V (following DIN EN 50395)

Properties and approvals

Flame-retardant	According to IEC 60332-1-2, Cable Flame, VW-1, FT1, FT2 / Horizontal Flame
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL verified	Certificate No. B129699: "igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year"
UL/CSA AWM	See data sheet for details ► www.igus.eu/CF886

Basic requirements	low	1	2	3	4	5	6	7	highest
Travel distance	unsupported	1	2	3	4	5	6	≥ 400m	
Oil resistance	none	1	2	3	4	highest			
Torsion	none	1	2	3	4	±360°			

Class 3.1.1.1

NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.00302/19
REACH	In accordance with regulation (EC) No. 1907/2006 (REACH)
Lead-free	Following 2011/65/EC (RoHS-II/RoHS-III)
CE	Following 2014/35/EU
UKCA	In accordance with the valid regulations of the United Kingdom (as at 08/2021)

Guaranteed service life (details see page 28-29)

Double strokes*	1 million	3 million	5 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+5/+15	17.5	18.5	19.5
+15/+60	15	16	17
+60/+70	17.5	18.5	19.5

* Higher number of double strokes? Service life calculation online ► www.igus.eu/chainflexlife

Typical application areas

- For flexing applications, Class 3
- Especially for unsupported travels, Class 1
- Without influence of oil, Class 1
- No torsion, Class 1
- Preferably indoor applications
- Wood/stone processing, packaging industry, feeding, handling, adjusting devices

Part No.	Number of cores and conductor nominal cross section [mm ²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF886.160.01	(1x16)C	11.5	186	262
CF886.250.01	(1x25)C	13.0	280	363
CF886.350.01	(1x35)C	15.5	394	535

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core x = without earth core



Cables available in the chainflex® CASE

Simple savings on delivery, storage space and re-ordering with the chainflex® CASE - ship'n store by igus®.

More on this on page 24/25 and online: www.igus.eu/cf-case



Spindle cable/Single core | PUR | chainflex® CF270.UL.D

36 10 million Double strokes guaranteed **10 x d** Bend radius, e-chain® **10m** Travel distance, e-chain®

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

Dynamic information

Bend radius	e-chain® linear	minimum 10 x d
	flexible	minimum 8 x d
	fixed	minimum 5 x d
Temperature	e-chain® linear	-25°C up to +80°C
	flexible	-40°C up to +80°C (following DIN EN 60811-504)
	fixed	-50°C up to +80°C (following DIN EN 50305)
v max.	unsupported	10m/s
	gliding	2m/s
a max.		50m/s²
Travel distance		Unsupported travels and up to 10m for gliding applications, Class 2

Cable structure

Conductor	Conductor cable consisting of pre-leads (following DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Overall shield	Bending-resistant braiding made of tinned copper wires. Coverage linear approx. 55%, optical approx. 80%
Outer jacket	Low-adhesion, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2) Colour: Pastel orange (similar to RAL 2003)

Electrical information

Nominal voltage	600/1,000V (following DIN VDE 0298-3) 1,000V (following UL)
Testing voltage	4,000V (following DIN EN 50395)

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Offshore	MUD-resistant following NEK 606 - status 2016
Flame-retardant	According to IEC 60332-1-2, Cable Flame, VW-1, FT1, FT2 / Horizontal Flame
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754

EPLAN download, configurators ► www.igus.eu/CF270ULD

36-month guarantee ... more than 1,350 cable types from stock ... no cutting charges



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Basic requirements
Travel distance
Oil resistance
Torsion

low	1	2	3	4	5	6	7	highest
unsupported	1	2	3	4	5	6	≥ 400m	
none	1	2	3	4	highest			
none	1	2	3	4	±360°			

Class 4.2.3.1

- UL verified
- UL/CSA AWM
- NFPA
- EAC
- REACH
- Lead-free
- Cleanroom
- DESINA
- CE
- UKCA

Certificate No. B129699: "igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year"
See data sheet for details ► www.igus.eu/CF270ULD

Following NFPA 79-2018, chapter 12.9

Certificate No. RU C-DE.ME77.B.00863/20

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 CF77.UL.05.12.D - tested by IPA according to standard DIN EN ISO 14644-1
According to VDW, DESINA standardisation

Following 2014/35/EU

In accordance with the valid regulations of the United Kingdom (as at 08/2021)

Guaranteed service life (details see page 28-29)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-25/-15	12.5	13.5	14.5
-15/+70	10	11	12
+70/+80	12.5	13.5	14.5

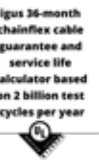
* Higher number of double strokes? Service life calculation online ► www.igus.eu/chainflexlife

Typical application areas

- For medium duty applications, Class 4
- Unsupported travels and up to 10m for gliding applications, Class 2
- Almost unlimited resistance to oil, Class 3
- No torsion, Class 1
- Indoor and outdoor applications without direct sun radiation
- Machining units/machine tools, low temperature applications

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF270.UL.60.01.D	(1x6.0)C	7.5	72	95
CF270.UL.100.01.D	(1x10)C	8.5	114	145
CF270.UL.160.01.D	(1x16)C	9.5	178	209
CF270.UL.250.01.D	(1x25)C	11.0	269	304
CF270.UL.350.01.D	(1x35)C	13.0	374	419
CF270.UL.500.01.D	(1x50)C	15.0	525	579
CF270.UL.700.01.D	(1x70)C	17.0	751	804

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core x = without earth core



Spindle cable/Single core | TPE | chainflex® CF300.UL.D

36 10 million Double strokes guaranteed **7.5 x d** Bend radius, e-chain® **400m** Travel distance, e-chain®

- For extremely heavy duty applications
- TPE outer jacket
- Oil and bio-oil-resistant
- Flame-retardant
- UV-resistant
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	e-chain® linear	minimum 7.5 x d
	flexible	minimum 6 x d
	fixed	minimum 4 x d
Temperature	e-chain® linear	-35°C up to +90°C
	flexible	-45°C up to +90°C (following DIN EN 60811-504)
	fixed	-50°C up to +90°C (following DIN EN 50305)
v max.	unsupported	10m/s
a max.	gliding	6m/s
Travel distance	Unsupported travels and up to 400m and more for gliding applications, Class 6	
Torsion	Torsion ±90°, with 1m cable length, Class 2	

Cable structure

Conductor	Conductor cable consisting of pre-leads (following DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Signal black (similar to RAL 9004)

Electrical information

Nominal voltage	600/1,000V (following DIN VDE 0298-3) 1,000V (following UL)
Testing voltage	4,000V (following DIN EN 50395)

Properties and approvals

UV resistance	High
Oil resistance	Oil-resistant (following DIN EN 60811-404), bio-oil-resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Flame-retardant	According to IEC 60332-1-2, Cable Flame, VW-1, FT1, FT2 / Horizontal Flame
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL verified	Certificate No. B129699: "igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year"
UL/CSA AWM	See data sheet for details ► www.igus.eu/CF300ULD

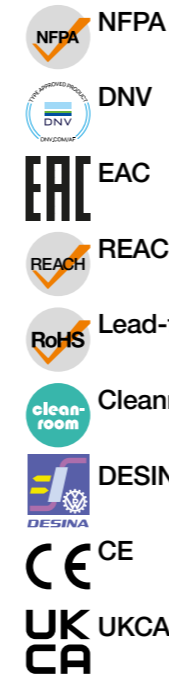
EPLAN download, configurators ► www.igus.eu/CF300ULD

36-month guarantee ... more than 1,350 cable types from stock ... no cutting charges



EU2023

Class 6.6.4.2



Basic requirements	low	1	2	3	4	5	6	7	highest
Travel distance	unsupported	1	2	3	4	5	6	≥ 400m	
Oil resistance	none	1	2	3	4	highest			
Torsion	none	1	2	3	4	±360°			

Following NFPA 79-2018, chapter 12.9

Type Approval Certificate TAE00003XC

Certificate No. RU C-DE.ME77.B.00863/20

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 CF34.UL.25.04.D - tested by IPA according to standard DIN EN ISO 14644-1

According to VDW, DESINA standardisation

Following 2014/35/EU

In accordance with the valid regulations of the United Kingdom (as at 08/2021)

Guaranteed service life (details see page 28-29)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	10	11	12
-25/+80	7.5	8.5	9.5
+80/+90	10	11	12

* Higher number of double strokes? Service life calculation online ► www.igus.eu/chainflexlife

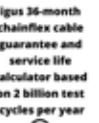
Typical application areas

- For heavy-duty applications, Class 6
- Unsupported travels and up to 400m and more for gliding applications, Class 6
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- Torsion ±90°, with 1m cable length, Class 2
- Indoor and outdoor applications, UV-resistant
- Storage and retrieval units for high-bay warehouses, machining units/machine tools, quick handling, cleanroom, semiconductor insertion, outdoor cranes, low-temperature applications

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF300.UL.40.01.D	1x4.0	6.0	41	59
CF300.UL.60.01.D	1x6.0	7.0	61	83
CF300.UL.100.01.D	1x10	7.5	100	124
CF300.UL.160.01.D	1x16	9.5	159	195
CF300.UL.250.01.D	1x25	11.5	248	294
CF300.UL.350.01.D	1x35	12.5	347	395
CF300.UL.500.01.D	1x50	14.5	495	551
CF300.UL.700.01.D	1x70	16.5	710	769
CF300.UL.950.01.D	1x95	20.0	936	1042
CF300.UL.1200.01.D	1x120	21.5	1184	1295
CF300.UL.1500.01.D	1x150	23.5	1469	1579
CF300.UL.1850.01.D	1x185	26.5	1928	2052

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core x = without earth core

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Spindle cable/Single core | TPE | chainflex® CFPE

36 10 million Double strokes guaranteed **7.5 x d** Bend radius, e-chain® **400m** Travel distance, e-chain®

- For extremely heavy duty applications
- TPE outer jacket
- Oil and bio-oil-resistant
- Flame-retardant
- UV-resistant
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	e-chain® linear flexible	minimum 7.5 x d minimum 6 x d
	fixed	minimum 4 x d
Temperature	e-chain® linear flexible	-35°C up to +90°C -45°C up to +90°C (following DIN EN 60811-504)
	fixed	-50°C up to +90°C (following DIN EN 50305)
v max.	unsupported	10m/s
a max.	gliding	6m/s
Travel distance	Unsupported travels and up to 400m and more for gliding applications, Class 6	
Torsion	Torsion ±90°, with 1m cable length, Class 2	

Cable structure

Conductor	Conductor cable consisting of pre-leads (following DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Core identification	Green-yellow
Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: Signal black (similar to RAL 9004)

Electrical information

Nominal voltage	600/1,000V (following DIN VDE 0298-3) 1,000V (following UL)
Testing voltage	4,000V (following DIN EN 50395)

Properties and approvals

UV resistance	High
Oil resistance	Oil-resistant (following DIN EN 60811-404), bio-oil-resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Flame-retardant	According to IEC 60332-1-2, Cable Flame, VW-1, FT1, FT2 / Horizontal Flame
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL verified	Certificate No. B129699: "igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year"

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36-month guarantee ... more than 1,350 cable types from stock ... no cutting charges



Basic requirements	low	1	2	3	4	5	6	7	highest
Travel distance	unsupported	1	2	3	4	5	6	≥ 400m	
Oil resistance	none	1	2	3	4	highest			
Torsion	none	1	2	3	4	±360°			

Class 6.6.4.2

UL/CSA AWM	See data sheet for details ► www.igus.eu/CFPEE
NFPA	Following NFPA 79-2018, chapter 12.9
DNV	Type Approval Certificate TAE00003XC
EAC	Certificate No. RU C-DE.ME77.B.00863/20
REACH	In accordance with regulation (EC) No. 1907/2006 (REACH)
Lead-free	Following 2011/65/EC (RoHS-II/RoHS-III)
Cleanroom	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
CE	Following 2014/35/EU
UKCA	In accordance with the valid regulations of the United Kingdom (as at 08/2021)

Guaranteed service life (details see page 28-29)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	10	11	12
-25/+80	7.5	8.5	9.5
+80/+90	10	11	12

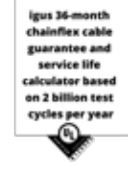
* Higher number of double strokes? Service life calculation online ► www.igus.eu/chainflexlife

Typical application areas

- For heavy-duty applications, Class 6
- Unsupported travels and up to 400m and more for gliding applications, Class 6
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- Torsion ±90°, with 1m cable length, Class 2
- Indoor and outdoor applications, UV-resistant
- Storage and retrieval units for high-bay warehouses, machining units/machine tools, quick handling, cleanroom, semiconductor insertion, outdoor cranes, low-temperature applications

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CFPE.15.01	1G1.5	4.5	16	31
CFPE.25.01	1G2.5	5.5	25	42
CFPE.40.01	1G4.0	6.0	41	59
CFPE.60.01	1G6.0	7.0	61	83
CFPE.100.01	1G10	7.5	100	124
CFPE.160.01	1G16	9.5	159	195
CFPE.250.01	1G25	11.5	248	294
CFPE.350.01	1G35	12.5	347	395
CFPE.500.01	1G50	14.5	495	551
CFPE.700.01	1G70	16.5	725	813
CFPE.950.01	1G95	20.0	936	1080

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. G = with green-yellow earth core x = without earth core



Spindle cable/Single core | TPE | chainflex® CF310.UL

36 10 million Double strokes guaranteed **7.5 x d** Bend radius, e-chain® **400m** Travel distance, e-chain®

- For extremely heavy duty applications
- TPE outer jacket
- Shielded
- Oil and bio-oil-resistant
- Flame-retardant
- UV-resistant
- Hydrolysis and microbe-resistant

Dynamic information

Bend radius	e-chain® linear	minimum 7.5 x d
	flexible	minimum 6 x d
	fixed	minimum 4 x d
Temperature	e-chain® linear	-35°C up to +90°C
	flexible	-45°C up to +90°C (following DIN EN 60811-504)
	fixed	-50°C up to +90°C (following DIN EN 50305)
v max.	unsupported	10m/s
	gliding	6m/s
a max.		100m/s ²
Travel distance	Unsupported travels and up to 400m and more for gliding applications, Class 6	

Cable structure

Conductor	Conductor cable consisting of pre-leads (following DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Overall shield	Extremely bending-resistant 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®. Colour: Signal black (similar to RAL 9004)

Electrical information

Nominal voltage	600/1,000V (following DIN VDE 0298-3) 1,000V (following UL)
Testing voltage	4,000V (following DIN EN 50395)

Properties and approvals

UV resistance	High
Oil resistance	Oil-resistant (following DIN EN 60811-404), bio-oil-resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Flame-retardant	According to IEC 60332-1-2, Cable Flame, VW-1, FT1, FT2 / Horizontal Flame
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL verified	Certificate No. B129699: "igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year"
UL/CSA AWM	See data sheet for details ► www.igus.eu/CF310UL

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36-month guarantee ... more than 1,350 cable types from stock ... no cutting charges



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Basic requirements	low	1	2	3	4	5	6	7	highest
Travel distance	unsupported	1	2	3	4	5	6	≥ 400m	
Oil resistance	none	1	2	3	4	highest			
Torsion	none	1	2	3	4	±360°			

Class 6.6.4.1

NFPA
 DNV
 EAC
 REACH
 Lead-free
 Cleanroom
 CE
 UKCA

Following NFPA 79-2018, chapter 12.9
Type Approval Certificate TAE00003XC
Certificate No. RU C-DE.ME77.B.00863/20
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 CF34.UL.25.04.D - tested by IPA according to standard DIN EN ISO 14644-1
Following 2014/35/EU
In accordance with the valid regulations of the United Kingdom (as at 08/2021)

Guaranteed service life (details see page 28-29)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	10	11	12
-25/+80	7.5	8.5	9.5
+80/+90	10	11	12

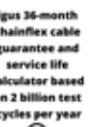
* Higher number of double strokes? Service life calculation online ► www.igus.eu/chainflexlife

Typical application areas

- For heavy-duty applications, Class 6
- Unsupported travels and up to 400m and more for gliding applications, Class 6
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- No torsion, Class 1
- Indoor and outdoor applications, UV-resistant
- Storage and retrieval units for high-bay warehouses, machining units/machine tools, quick handling, cleanroom, semiconductor insertion, outdoor cranes, low-temperature applications

Part No.	Number of cores and conductor nominal cross section [mm ²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF310.UL.25.01	(1x2.5)C	6.0	41	58
CF310.UL.40.01	(1x4.0)C	6.5	57	77
CF310.UL.60.01	(1x6.0)C	7.0	80	101
CF310.UL.100.01	(1x10)C	8.5	121	146
CF310.UL.160.01	(1x16)C	10.0	184	223
CF310.UL.250.01	(1x25)C	12.0	280	329
CF310.UL.350.01	(1x35)C	13.0	395	444
CF310.UL.500.01	(1x50)C	15.0	536	587
CF310.UL.700.01	(1x70)C	18.0	779	851
CF310.UL.950.01	(1x95)C	21.0	1015	1125
CF310.UL.1200.01	(1x120)C	22.0	1270	1378
CF310.UL.1500.01	(1x150)C	24.5	1592	1700
CF310.UL.1850.01	(1x185)C	27.5	2066	2189

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core x = without earth core









Spindle cable/Single core | TPE | chainflex® CF330.D

- 36** 12.5 million Double strokes guaranteed
- 7.5 x d** Bend radius, e-chain®
- 400m** Travel distance, e-chain®




- For heaviest duty applications
- TPE outer jacket
- Oil and bio-oil-resistant
- PVC and halogen-free
- UV-resistant
- Hydrolysis and microbe-resistant

Now available with UL approval & 25% longer service life



Dynamic information

 Bend radius	e-chain® linear flexible	minimum 7.5 x d minimum 6 x d
	fixed	minimum 4 x d
 Temperature	e-chain® linear flexible	-35°C up to +90°C -50°C up to +90°C (following DIN EN 60811-504)
	fixed	-55°C up to +90°C (following DIN EN 50305)
 v max.	unsupported	10m/s
	gliding	6m/s
 a max.		100m/s ²
 Travel distance		Unsupported travels and up to 400m and more for gliding applications, Class 6
 Torsion		Torsion ±90°, with 1m cable length, Class 2






Cable structure

 Conductor	Conductor cable consisting of pre-leads (following DIN EN 60228).
 Core insulation	Mechanically high-quality TPE mixture.
 Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®. Colour: jet black (similar to RAL 9005)

Electrical information








 Nominal voltage	600/1,000V (following DIN VDE 0298-3) 1,000V (following UL)
 Testing voltage	4,000V (following DIN EN 50395)

Properties and approvals

 UV resistance	High
 Oil resistance	Oil-resistant (following DIN EN 60811-404), bio-oil-resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
 Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
 Halogen-free	Following DIN EN 60754
 UL verified	Certificate No. B129699: "igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year"

Basic requirements	low	1	2	3	4	5	6	7	highest
Travel distance	unsupported	1	2	3	4	5	6	≥ 400m	
Oil resistance	none	1	2	3	4	highest			
Torsion	none	1	2	3	4	±360°			

Class 7.6.4.2

-  **UL AWM** See data sheet for details ► www.igus.eu/CF330D
-  **EAC** Certificate No. RU C-DE.ME77.B.00863/20
-  **REACH** In accordance with regulation (EC) No. 1907/2006 (REACH)
-  **Lead-free** Following 2011/65/EC (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** Following 2014/35/EU
-  **UKCA** In accordance with the valid regulations of the United Kingdom (as at 08/2021)

Guaranteed service life (details see page 28-29)

Double strokes*	5 million	7.5 million	12.5 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	10	11	12
-25/+80	7.5	8.5	9.5
+80/+90	10	11	12

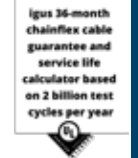
* Higher number of double strokes? Service life calculation online ► www.igus.eu/chainflexlife

Typical application areas

- For heavy-duty applications, Class 7
- Unsupported travels and up to 400m and more for gliding applications, Class 6
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- Torsion ±90°, with 1m cable length, Class 2
- Indoor and outdoor applications, UV-resistant
- Storage and retrieval units for high-bay warehouses, machining units/machine tools, quick handling, cleanroom, semiconductor insertion, outdoor cranes, low-temperature applications

Part No.	Number of cores and conductor nominal cross section [mm ²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF330.60.01.D	1x6.0	7.0	61	77
CF330.100.01.D	1x10	7.5	100	119
CF330.160.01.D	1x16	9.5	159	181
CF330.250.01.D	1x25	11.5	248	284
CF330.350.01.D	1x35	12.5	347	385
CF330.500.01.D	1x50	14.5	495	534
CF330.700.01.D	1x70	16.5	710	754
CF330.950.01.D	1x95	20.0	936	1015
CF330.1200.01.D	1x120	21.5	1184	1265
CF330.1500.01.D	1x150	23.5	1469	1548
CF330.1850.01.D	1x185	26.5	1928	2016

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits. G = with green-yellow earth core x = without earth core



Example image

igus® chainflex® CF330.D

Spindle cable/Single core | TPE | chainflex® CF340

- 36** 12.5 million Double strokes guaranteed
- 7.5 x d** Bend radius, e-chain®
- 400m** Travel distance, e-chain®

- For heaviest duty applications
- TPE outer jacket
- Shielded
- Oil and bio-oil-resistant
- PVC and halogen-free
- UV-resistant
- Hydrolysis and microbe-resistant

Now available
with UL approval
& 25% longer
service life

Dynamic information

Bend radius	e-chain® linear	minimum 7.5 x d
	flexible	minimum 6 x d
	fixed	minimum 4 x d
Temperature	e-chain® linear	-35°C up to +90°C
	flexible	-50°C up to +90°C (following DIN EN 60811-504)
	fixed	-55°C up to +90°C (following DIN EN 50305)
v max.	unsupported	10m/s
	gliding	6m/s
a max.		100m/s ²
Travel distance		Unsupported travels and up to 400m and more for gliding applications, Class 6

Cable structure

Conductor	Conductor cable consisting of pre-leads (following DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Overall shield	Extremely bending-resistant 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®. Colour: jet black (similar to RAL 9005)

Electrical information

Nominal voltage	600/1,000V (following DIN VDE 0298-3) 1,000V (following UL)
Testing voltage	4,000V (following DIN EN 50395)

Properties and approvals

UV resistance	High
Oil resistance	Oil-resistant (following DIN EN 60811-404), bio-oil-resistant (following VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
UL verified	Certificate No. B129699: "igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year"

Basic requirements	low	1	2	3	4	5	6	7	highest
Travel distance	unsupported	1	2	3	4	5	6	≥ 400m	
Oil resistance	none	1	2	3	4	highest			
Torsion	none	1	2	3	4	±360°			

Class 7.6.4.1

- UL AWM** See data sheet for details ► www.igus.eu/CF340
- EAC** Certificate No. RU C-DE.ME77.B.00863/20
- REACH** In accordance with regulation (EC) No. 1907/2006 (REACH)
- Lead-free** Following 2011/65/EC (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
- CE** Following 2014/35/EU
- UKCA** In accordance with the valid regulations of the United Kingdom (as at 08/2021)

Guaranteed service life (details see page 28-29)

Double strokes*	5 million	7.5 million	12.5 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-35/-25	10	11	12
-25/+80	7.5	8.5	9.5
+80/+90	10	11	12

* Higher number of double strokes? Service life calculation online ► www.igus.eu/chainflexlife

Typical application areas

- For heavy-duty applications, Class 7
- Unsupported travels and up to 400m and more for gliding applications, Class 6
- Almost unlimited resistance to oil, also with bio-oils, Class 4
- No torsion, Class 1
- Indoor and outdoor applications, UV-resistant
- Storage and retrieval units for high-bay warehouses, machining units/machine tools, quick handling, cleanroom, semiconductor insertion, outdoor cranes, low-temperature applications

Part No.	Number of cores and conductor nominal cross section [mm ²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF340.40.01	(1x4.0)C	6.5	57	73
CF340.160.01	(1x16)C	10.0	184	215
CF340.250.01	(1x25)C	12.0	280	319
CF340.350.01	(1x35)C	13.0	395	433
CF340.500.01	(1x50)C	15.0	536	574
CF340.700.01	(1x70)C	17.5	779	832
CF340.950.01	(1x95)C	21.0	1015	1093
CF340.1200.01	(1x120)C	22.0	1270	1341
CF340.1500.01	(1x150)C	24.5	1592	1642
CF340.1850.01	(1x185)C	27.5	2066	2157
CF340.2400.01	(1x240)C	30.5	2566	2731

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core x = without earth core



Example image

igus® chainflex® CF340

Medium voltage cable | PUR | chainflex® CFRANE.PUR

36 10 million Double strokes guaranteed **10 x d** Bend radius, e-chain® **400m** Travel distance, e-chain®

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

Dynamic information

Bend radius	e-chain® linear flexible	minimum 10 x d minimum 8 x d
	fixed	minimum 5 x d
Temperature	e-chain® linear flexible	-20°C up to +80°C -25°C up to +80°C (following DIN EN 60811-504)
	fixed	-30°C up to +80°C (following DIN EN 50305)
v max.	unsupported	10m/s
	gliding	6m/s
a max.		50m/s ²
Travel distance		Unsupported travels and up to 400m and more for gliding applications, Class 6

Cable structure

Conductor	Highly-flexible cable consisting of bare copper wires (according to DIN EN 60228).
Core insulation	Inner and outer semiconducting layer made of conductive rubber. Insulating sheath made of highly-quality, heat-resistant and ozone-proof ethylene propylene rubber (EPR).
Overall shield	Extremely bending-resistant wrapping made of tinned copper wires Coverage approx. 85% optical
Outer jacket	Low-adhesion, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2) Colour: Flame red (similar to RAL 3000)

Electrical information

Nominal voltage	6/10kV or 8.7/15kV (following DIN VDE 0250), further voltages upon request.
Testing voltage	24kV (following DIN VDE 0250, Part 813)

Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
Flame-retardant	According to IEC 60332-1-2
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)

Basic requirements	low	1	2	3	4	5	6	7	highest
Travel distance	unsupported	1	2	3	4	5	6	≥ 400m	
Oil resistance	none	1	2	3	4	highest			
Torsion	none	1	2	3	4	±360°			

Class 6.6.3.1

- Halogen-free** Following DIN EN 60754
- UL verified** Certificate No. B129699: "igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year" In accordance with regulation (EC) No. 1907/2006 (REACH)
- REACH**
- Lead-free** Following 2011/65/EC (RoHS-II/RoHS-III)
- CE** Following 2014/35/EU
- UKCA** In accordance with the valid regulations of the United Kingdom (as at 08/2021)

Guaranteed service life (details see page 28-29)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-20/-10	12.5	13.5	14.5
-10/+70	10	11	12
+70/+80	12.5	13.5	14.5

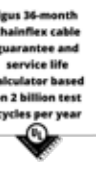
* Higher number of double strokes? Service life calculation online ► www.igus.eu/chainflexlife

Typical application areas

- For maximum voltages and outputs, Class 6
- Unsupported travels and up to 400m and more for gliding applications, Class 6
- Almost unlimited resistance to oil, Class 3
- No torsion, Class 1
- Indoor and outdoor applications, UV-resistant
- Ship to shore, crane applications, conveyor technology

Part No.	Number of cores and conductor nominal cross section [mm ²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CFCRANE.PUR.350.01.6/10kV	(1x35/16)C	26.0	568	852
CFCRANE.PUR.500.01.6/10kV	(1x50/16)C	27.0	722	1025
CFCRANE.PUR.700.01.6/10kV	(1x70/16)C	29.0	941	1249
CFCRANE.PUR.950.01.6/10kV	(1x95/16)C	31.0	1166	1523

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core x = without earth core



Example image

EPLAN download, configurators ► www.igus.eu/CFCRANEPUR

36-month guarantee ... more than 1,350 cable types from stock ... no cutting charges



EU2023

EU2023



UL-verified chainflex® guarantee ... www.igus.eu/ul-verified

Medium voltage cable | igupren | chainflex® CFCRANE

36 10 million
Double strokes guaranteed

10 x d
Bend radius, e-chain®

400m
Travel distance, e-chain®

- For maximum voltages and outputs
- igupren outer jacket
- Shielded
- Oil-resistant
- Flame-retardant

Dynamic information

Bend radius	e-chain® linear flexible	minimum 10 x d
	fixed	minimum 8 x d
Temperature	e-chain® linear flexible	-20°C up to +80°C
	fixed	-25°C up to +80°C (following DIN EN 60811-504)
v max.	unsupported	10m/s
a max.	gliding	6m/s
Travel distance	Unsupported travels and up to 400m and more for gliding applications, Class 6	

Cable structure

Conductor	Highly-flexible cable consisting of tinned copper wires (following DIN EN 60228).
Core insulation	Inner and outer semiconducting layer made of conductive rubber. Insulating sheath made of highly-quality, heat-resistant and ozone-proof ethylene propylene rubber (EPR).
Overall shield	Extremely bending-resistant, tinned copper shield. Coverage approx. 95% optical
Outer jacket	Low-adhesion iguprene mixture, especially abrasion resistant, adapted to suit the requirements in e-chains® (following VDE 0207, Part 21). Colour: Flame red (similar to RAL 3000)

Electrical information

Nominal voltage	6/10kV (following DIN VDE 0250), other voltages upon request.
Testing voltage	17kV (following DIN VDE 0250, Part 813)

Basic requirements
Travel distance
Oil resistance
Torsion

low	1	2	3	4	5	6	7	highest
unsupported	1	2	3	4	5	6	≥ 400m	
none	1	2	3	4	highest			
none	1	2	3	4	±360°			

Class 6.6.3.1

Properties and approvals

UV resistance	High
Oil resistance	Oil-resistant (following DIN EN 60811-404)
Flame-retardant	According to IEC 60332-1-2
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
UL verified	Certificate No. B129699: "igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year"
REACH	In accordance with regulation (EC) No. 1907/2006 (REACH)
Lead-free	Following 2011/65/EC (RoHS-II/RoHS-III)
CE	Following 2014/35/EU
UKCA	In accordance with the valid regulations of the United Kingdom (as at 08/2021)

Guaranteed service life (details see page 28-29)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-20/-10	12.5	13.5	14.5
-10/+70	10	11	12
+70/+80	12.5	13.5	14.5

* Higher number of double strokes? Service life calculation online ► www.igus.eu/chainflexlife

Typical application areas

- For maximum voltages and outputs, Class 6
- Unsupported travels and up to 400m and more for gliding applications, Class 6
- Almost unlimited resistance to oil, Class 3
- No torsion, Class 1
- Indoor and outdoor applications, UV-resistant
- Ship to shore, crane applications, conveyor technology

i This cable series will be individually manufactured for your special project. Due to this we do not have this cable on stock, but can offer it exactly for your special demands.

Medium voltage cables available from stock (CFCRANE.PUR) ► [Page 374](#)

Guarantee
igus chainflex
36
up to 36 months guarantee

igus 36-month
chainflex cable
guarantee and
service life
calculator based
on 2 billion test
cycles per year

CFRIP

UL LISTED

UL

UL

nec

NFPA

CUPA

DNV

EAC

REACH

RoHS

clean-room

UL

UL

CE

UKCA

UKCA

Guarantee
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UL