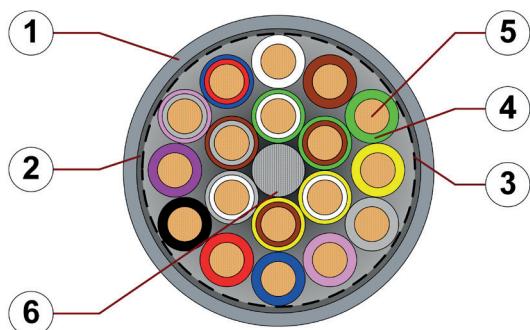


# Data sheet chainflex® CF240



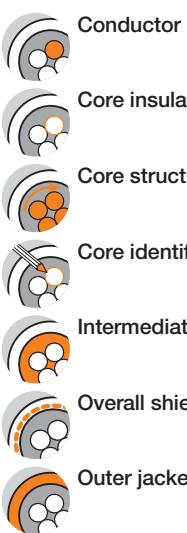
Data cable (Class 4.4.2.1) ● For medium duty applications ● PVC outer jacket ● Shielded  
● Oil-resistant ● Flame-retardant



## Example image

For detailed overview please see design table

## Cable structure



Conductor  
Very finely stranded special conductors of particularly bending resistant design made of bare copper wires.

Core insulation  
Mechanically high-quality TPE mixture.

Core structure  
The individual cores are wound in layers with a short pitch length.

Core identification  
Colour code in accordance with DIN 47100

Intermediate layer  
Foil taping over the outer layer.

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: Silver-grey (similar to RAL 7001)  
Printing: black



„00000 m\*\* igus chainflex CF240.---① -----② E310776 cULus AWM

Style 2464 VW-1 AWM I/II A/B 80°C 300V FT1 CE

RoHS-II conform [www.igus.de](http://www.igus.de) +++ chainflex cable works +++

\* Length printing: Not calibrated. Only intended as an orientation aid.  
① / ② Cable identification according to Part No. (see technical table).  
Example: ... chainflex CF240.01.18 (18x0.14)C E310776 ...

Example image

# Data sheet chainflex® CF240



Data cable (Class 4.4.2.1) ● For medium duty applications ● PVC outer jacket ● Shielded  
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## Dynamic information



Bend radius

e-chain® linear  
flexible  
fixed

minimum 10 x d  
minimum 8 x d  
minimum 5 x d



Temperature

e-chain® linear  
flexible  
fixed

+5°C up to +70°C  
-5°C up to +70°C (following DIN EN 60811-504)  
-15°C up to +70°C (following DIN EN 50305)



v max.

unsupported  
gliding

3m/s  
2m/s



a max.

20m/s<sup>2</sup>



Travel distance

Unsupported travels and up to 50m for gliding applications, Class 4



These values are based on specific applications or tests. They do not represent the limit of what is technically feasible.

## Guaranteed service life according to guarantee conditions

Double strokes	5 million		7.5 million		10 million	
	< 10m	≥ 10m	< 10m	≥ 10m	< 10m	≥ 10m
Temperature, from/to [°C]	R min. [x d]					
+5/+15	12.5	15	13.5	16	14.5	17
+15/+60	10	12.5	11	13.5	12	14.5
+60/+70	12.5	15	13.5	16	14.5	17

Minimum guaranteed service life of the cable under the specified conditions.

The installation of the cable is recommended within the middle temperature range.

## Electrical information



Nominal voltage

300/300V (following DIN VDE 0298-3)  
300V (following UL)



Testing voltage

1500V (following DIN EN 50395)

# Data sheet

## chainflex® CF240



**Data cable (Class 4.4.2.1) ● For medium duty applications ● PVC outer jacket ● Shielded  
● Oil-resistant ● Flame-retardant**



### Properties and approvals



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)



PTFE-free

The design of these products does not contain PTFE



UL-verified

Certificate No. V293650: „igus 4-year chainflex cable guarantee and service life calculator based on 2 billion test cycles per year“



UL/CSA AWM

Details see table UL AWM



NFPA

Following NFPA 79-2018, chapter 12.9



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, material/cable tested by IPA according to DIN EN ISO standard 14644-1



CE

Following 2014/35/EU



### Properties and approvals

#### UL/CSA AWM Details

Conductor nominal cross section [mm <sup>2</sup> ]	Number of cores	UL style core insulation	UL style outer jacket	UL Voltage Rating [V]	UL Temperature Rating [°C]
0.14	3-24	10493	2464	300	80
0.25	3-24	10493	2464	300	80
0.34	2-24	10493	2464	300	80

Example image

igus® chainflex® CF240

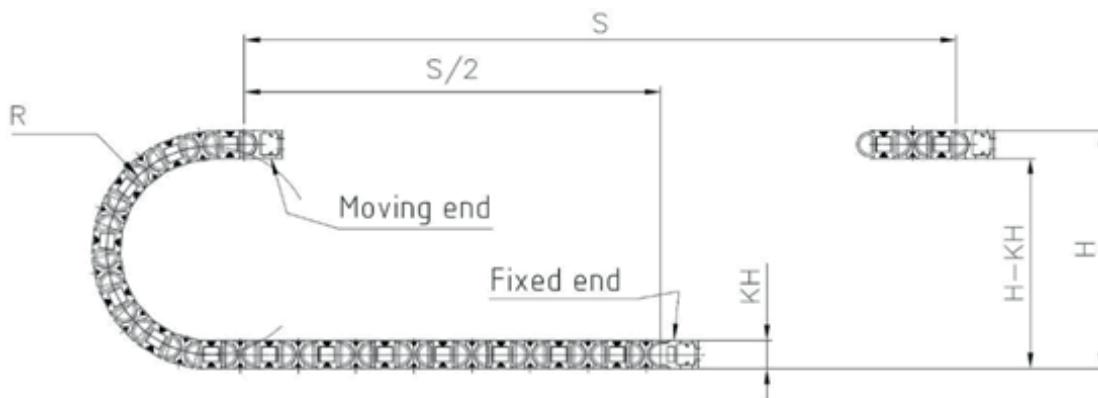
# Data sheet chainflex® CF240



Data cable (Class 4.4.2.1) ● For medium duty applications ● PVC outer jacket ● Shielded  
● Oil-resistant ● Flame-retardant

## Typical lab test setup for this cable series

Test bend radius R	approx. 40 - 135 mm
Test travel S	approx. 1 - 15 m
Test duration	minimum 2 - 4 million double strokes
Test speed	approx. 0.5 - 2 m / s
Test acceleration	approx. 0.5 - 1.5 m / s <sup>2</sup>



Example image



## Typical application areas

- For medium duty applications, Class 4
- Unsupported travels and up to 50m for gliding applications, Class 4
- 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, handling, indoor cranes

# Data sheet

## chainflex® CF240



**Data cable (Class 4.4.2.1) ● For medium duty applications ● PVC outer jacket ● Shielded ● Oil-resistant ● Flame-retardant**



### Technical tables:

#### Mechanical information

Part No.	Number of cores and conductor nominal cross section [mm <sup>2</sup> ]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF240.01.03	(3x0.14)C	4.5	12	28
CF240.01.04	(4x0.14)C	5.0	17	32
CF240.01.05	(5x0.14)C	5.5	19	37
CF240.01.07	(7x0.14)C	6.0	25	47
CF240.01.14	(14x0.14)C	7.0	41	75
CF240.01.18	(18x0.14)C	7.5	51	90
CF240.01.24	(24x0.14)C	8.5	64	125
CF240.02.03	(3x0.25)C	5.0	19	35
CF240.02.04	(4x0.25)C	5.5	23	45
CF240.02.05	(5x0.25)C	6.0	28	49
CF240.02.07	(7x0.25)C	6.5	35	61
CF240.02.08	(8x0.25)C	7.0	39	68
CF240.02.14	(14x0.25)C	7.5	60	92
CF240.02.18	(18x0.25)C	8.5	71	122
CF240.02.24	(24x0.25)C	10.0	95	161
CF240.03.02	(2x0.34)C	5.5	21	37
CF240.03.03	(3x0.34)C	5.5	29	42
CF240.03.04	(4x0.34)C	6.0	33	51
CF240.03.05	(5x0.34)C	6.5	38	56
CF240.03.07	(7x0.34)C	7.5	50	77
CF240.03.10	(10x0.34)C	8.0	58	97
CF240.03.14	(14x0.34)C	8.0	74	112
CF240.03.18	(18x0.34)C	9.0	91	139
CF240.03.24	(24x0.34)C	10.0	119	177

**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

#### Electrical information

Conductor nominal cross section [mm <sup>2</sup> ]	Maximum conductor resistance at 20 °C (following DIN EN 50289-1-2) [Ω/km]	Max. current rating at 30 °C [A]
0.14	138	2.5
0.25	79	5
0.34	57	7

The final maximum current rating depends among other things on the ambient conditions, the type of the installation and the number of loaded cores.



# Data sheet

## chainflex® CF240



Data cable (Class 4.4.2.1) • For medium duty applications • PVC outer jacket • Shielded  
 • Oil-resistant • Flame-retardant

### Design table

Part No.	Number of cores	Core design	Part No.	Number of cores	Core design
CF240.XX.02	2		CF240.XX.08	8	
CF240.XX.03	3		CF240.XX.10	10	
CF240.XX.04	4		CF240.XX.14	14	
CF240.XX.05	5		CF240.XX.18	18	
CF240.XX.07	7		CF240.XX.24	24	



Example image



# Data sheet chainflex® CF240



Data cable (Class 4.4.2.1) ● For medium duty applications ● PVC outer jacket ● Shielded  
● Oil-resistant ● Flame-retardant



## Colour code in accordance with DIN 47100

Conductor no.	Colours according to DIN ISO 47100	Conductor no.	Colours according to DIN ISO 47100
1	white	19	white-pink
2	brown	20	pink-brown
3	green	21	white-blue
4	yellow	22	brown-blue
5	grey	23	white-red
6	pink	24	brown-red
7	blue	25	white-black
8	red	26	brown-black
9	black	27	grey-green
10	violet	28	yellow-grey
11	grey-pink	29	pink-green
12	red-blue	30	yellow-pink
13	white-green	31	green-blue
14	brown-green	32	yellow-blue
15	white-yellow	33	green-red
16	yellow-brown	34	yellow-red
17	white-grey	35	green-black
18	grey-brown	36	yellow-black



igus 4-year  
chainflex cable  
guarantee and  
service life  
calculator based  
on 2 billion test  
cycles per year



Example image