Data sheet
chainflex® CF240.PUR

Data cable (Class 4.4.3.1) ● **For medium duty applications** ● **PUR outer jacket** ● **Shielded**
● **Oil resistant and coolant-resistant** ● **Flame-retardant** ● **PVC and halogen-free**
● **Notch-resistant** ● **Hydrolysis and microbe-resistant**

1. Outer jacket: Pressure extruded PUR mixture
2. Overall shield: Extremely bending-resistant braiding made of tinned copper wires
3. Banding: Plastic foil
4. Core insulation: Mechanically high-quality TPE mixture
5. Conductor: Very finely stranded special cores of particularly high-flex design made of bare copper wires
6. Strain relief: Tensile stress-resistant centre element

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

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, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2). Colour: Window-grey (similar to RAL 7040) Printing: black	

„00000 m"* igus chainflex CF240.PUR.--.--① -----② E310776 cЯUus

AWM Style 20549 AWM I A/B 80°C 300V FT2   DNV TAE00003X3

CE   RoHS-II conform   www.igus.eu   +++ chainflex cable works +++

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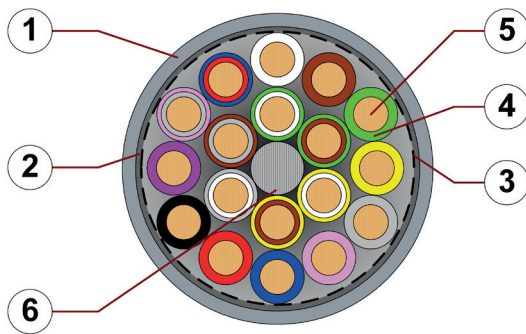Example: ... chainflex **CF240.PUR.01.18 (18x0.14)C E310776** ...

Example image

Data sheet
chainflex® CF240.PUR

igus®

Data cable (Class 4.4.3.1) ● For medium duty applications ● PUR outer jacket ● Shielded
● Oil resistant and coolant-resistant ● Flame-retardant ● PVC and halogen-free
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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	3m/s
	gliding	2m/s
a max.		20m/s²
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	
Temperature, from/to [°C]	< 10m	≥ 10m	< 10m	≥ 10m	< 10m	≥ 10m
	R min. [x d]	R min. [x d]	R min. [x d]	R min. [x d]	R min. [x d]	R min. [x d]
-25/-15	12.5	15	13.5	16	14.5	17
-15/+70	10	12.5	11	13.5	12	14.5
+70/+80	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)

Example image

igus® chainflex® CF240.PUR

Guarantee igus chainflex **4 YEARS** up to 4 years guarantee

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

CFRIP · PTFE FREE · c UL us LISTED · cⁿ US · nec NFPA · NFPA · C UL PA · DNV · REACH · RoHS · clean-room · DESINA

CE

Data sheet
chainflex® CF240.PUR

Data cable (Class 4.4.3.1) ● For medium duty applications ● PUR outer jacket ● Shielded ● Oil resistant and coolant-resistant ● Flame-retardant ● PVC and halogen-free ● Notch-resistant ● Hydrolysis and microbe-resistant

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, 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	
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	See data sheet for details ▶ www.igus.eu/CF240.PUR	
NFPA	Following NFPA 79-2018, chapter 12.9	
DNV	Type Approval Certificate TAE00003X3 (Issue 04/2025)	
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	
CE	Following 2014/35/EU	

Properties and approvals

UL/CSA AWM Details

Conductor nominal cross section [mm²]	Number of cores	UL style core insulation	UL style outer jacket	UL Voltage Rating [V]	UL Temperature Rating [°C]
0.14	4-18	10493	20549	300	80
0.25	3-25	10493	20549	300	80
0.34	3-18	10493	20549	300	80

Example image

igus® chainflex® CF240.PUR

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chainflex® CF240.PUR

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● **Notch-resistant** ● **Hydrolysis and microbe-resistant**

Typical lab test setup for this cable series

Test bend radius R	approx. 50 - 115 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^2

Typical application areas

● For medium duty applications, Class 4
● Unsupported travels and up to 50m for gliding applications, Class 4
● Almost unlimited resistance to oil, Class 3
● No torsion, Class 1
● Indoor and outdoor applications with average sun radiation
● Machining units/machine tools, storage and retrieval units for high-bay warehouses, packaging industry, quick handling, refrigerating sector

Example image
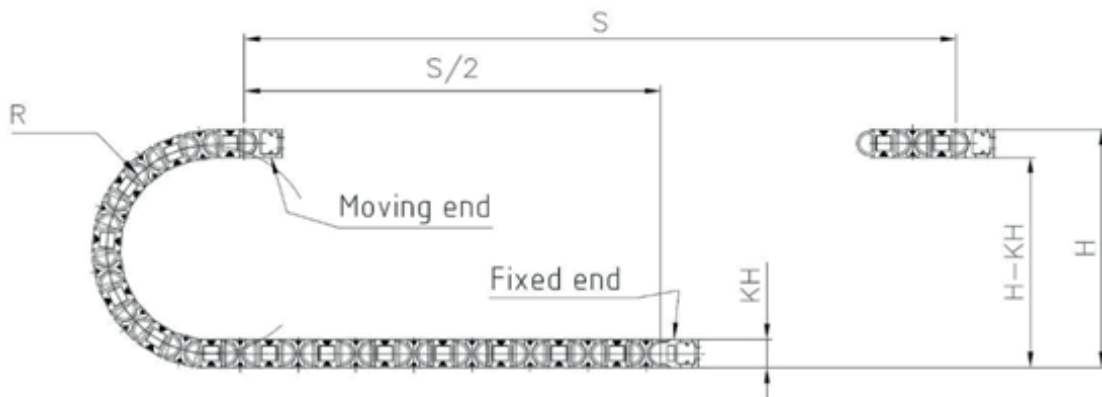
igus® chainflex® CF240.PUR

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Technical tables:

Mechanical information

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF240.PUR.01.04	(4x0.14)C	5.5	15	39
CF240.PUR.01.07	(7x0.14)C	6.5	24	54
CF240.PUR.01.08 [11]	(8x0.14)C	7.0	26	64
CF240.PUR.01.14	(14x0.14)C	7.5	41	79
CF240.PUR.01.18	(18x0.14)C	8.0	51	97
CF240.PUR.01.25	(25x0.14)C	8.5	66	101
CF240.PUR.02.03	(3x0.25)C	5.5	18	41
CF240.PUR.02.04	(4x0.25)C	6.0	22	45
CF240.PUR.02.05	(5x0.25)C	6.0	25	50
CF240.PUR.02.07	(7x0.25)C	7.0	33	65
CF240.PUR.02.08	(8x0.25)C	7.0	39	72
CF240.PUR.02.14	(14x0.25)C	8.0	60	103
CF240.PUR.02.18	(18x0.25)C	9.0	71	122
CF240.PUR.02.25	(25x0.25)C	10.5	97	152
CF240.PUR.03.03	(3x0.34)C	5.0	25	47
CF240.PUR.03.04	(4x0.34)C	5.5	30	54
CF240.PUR.03.05	(5x0.34)C	6.0	34	60
CF240.PUR.03.07	(7x0.34)C	6.5	45	84
CF240.PUR.03.14	(14x0.34)C	8.0	74	126
CF240.PUR.03.18	(18x0.34)C	8.5	91	156

[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

Electrical information

Conductor nominal cross section [mm²]	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.

Example image

igus® chainflex® CF240.PUR

Guarantee igus chainflex
4 YEARS
up to 4 years guarantee

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

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Design table

Part No.	Number of cores	Core design	Part No.	Number of cores	Core design
CF240.PUR.XX.03	3		CF240.PUR.XX.08	8	
CF240.PUR.XX.04	4		CF240.PUR.XX.14	14	
CF240.PUR.XX.05	5		CF240.PUR.XX.18	18	
CF240.PUR.XX.07	7		CF240.PUR.XX.25	25	

Example image

igus® chainflex® CF240.PUR

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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

Example image

igus® chainflex® CF240.PUR

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