PVC | iguPUR | **PUR** | TPE

Hybrid servo cable | PUR | chainflex® CF280.UL.H

Example image

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
- Flame-retardant
- PVC and halogen-free
- Notch-resistant
- Hydrolysis and microbe-resistant

New cable suitable for Bosch Rexroth ctrlX DRIVE

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	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	Power cores and control pair elements wound with a short pitch length around a high tensile strength centre element.
Core identification	According to Servo-Hybrid specification. Current data sheet ▶ www.chainflex.eu/CF220ULH
Element shield	Bending-resistant braiding made of tinned copper wires.
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) Variants ▶ Product range table

Electrical information

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

Class 4.2.3.1

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°			

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
PFAS-free	Use of PFAS-free materials according to the content of the REACH directive and its rules for the production and processing of chemical substances
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/CF280ULH
NFPA	Following NFPA 79-2018, chapter 12.9
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
Info	As hybrid cables are always designed for specific drive systems, additional electrotechnical data may need to be considered. You will find more information in the latest data sheet for the cable series.

Guaranteed service life (details see page 28-29)

Double strokes*	5 million	7.5 million	10 million
Temperature, from/to [°C]	R min. [x d]	R min. [x d]	R min. [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

CF280.UL.H
PUR
10 x d

Hybrid servo cable | PUR | chainflex® CF280.UL.H

Class 4.2.3.1

Basic requirements	low	1	2	3	**4**	5	6	7 highest
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Torsion	none	**1**	2	3	4	±360°		

CF280.UL.H
PUR
10 x 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]
SICK (HIPERFACE DSL)				
CF280.UL.H100.07.04.D	(4G0.75+(2x0.34)C +(2xAWG22)C)C	12.0	106	168
CF280.UL.H101.10.04.D	(4G1.0+(2x0.75)C +(2xAWG22)C)C	12.5	129	202
CF280.UL.H101.15.04.D	(4G1.5+(2x0.75)C +(2xAWG22)C)C	13.0	151	228
CF280.UL.H102.25.04.D	(4G2.5+(2x1.0)C +(2xAWG22)C)C	14.5	199	291
CF280.UL.H102.40.04.D [11)]	(4G4.0+(2x1.0)C +(2xAWG22)C)C	16.0	268	363
CF280.UL.H102.60.04.D	(4G6.0+(2x1.0)C +(2xAWG22)C)C	17.5	343	475
SEW cable type A, B, C, D, E				
CF280.UL.H200.15.07.D [15)]	(7x1.5+(2x0.75)C)C	15.0	182	266
CF280.UL.H200.25.07.D [15)]	(7x2.5+(2x0.75)C)C	18.0	263	368
CF280.UL.H201.15.04.D [15)]	4G1.5+(2x0.75)C +(3x0.75)C	12.5	132	210
CF280.UL.H201.25.04.D [15)]	4G2.5+(2x0.75)C +(3x0.75)	14.5	170	270
CF280.UL.H203.15.04.D	(4G1.5+(3x1.0)C)C	11.5	133	200
CF280.UL.H203.25.04.D	(4G2.5+(3x1.0)C)C	13.0	177	262
CF280.UL.H204.15.04.D	(4G1.5+(2x0.75)C +(3x1.0)C)C	13.5	178	263
CF280.UL.H206.40.04.D	(4G4.0+(2x0.75)C +(3x1.5)C)C	17.0	311	424
CF280.UL.H206.60.04.D	(4G6.0+(2x0.75)C +(3x1.5)C)C	18.5	398	517
MOVILINK DDI				
CF280.UL.H207.15.04.D	(4G1.5+2x(2x1.0)C +HF50-0.9/2.95)C	15.5	191	304
CF280.UL.H207.25.04.D	(4G2.5+2x(2x1.0)C +HF50-0.9/2.95)C	16.5	232	354

Part No.	Hybrid technology	Hybrid manufacturer
SICK (HIPERFACE DSL)		
CF280.UL.H100.07.04.D	SICK (HIPERFACE DSL)	please see selection table on page 271
CF280.UL.H101.10.04.D	SICK (HIPERFACE DSL)	please see selection table on page 271
CF280.UL.H101.15.04.D	SICK (HIPERFACE DSL)	please see selection table on page 271
CF280.UL.H102.25.04.D	SICK (HIPERFACE DSL)	please see selection table on page 271
CF280.UL.H102.40.04.D [11)]	SICK (HIPERFACE DSL)	please see selection table on page 271
CF280.UL.H102.60.04.D	SICK (HIPERFACE DSL)	please see selection table on page 271
SEW cable type A, B, C, D, E		
CF280.UL.H200.15.07.D [15)]	SEW cable type A/1.5	SEW
CF280.UL.H200.25.07.D [15)]	SEW cable type A/2.5	SEW
CF280.UL.H201.15.04.D [15)]	SEW cable type B/1.5	SEW
CF280.UL.H201.25.04.D [15)]	SEW cable type B/2.5	SEW
CF280.UL.H203.15.04.D	SEW cable type E/1.5	SEW
CF280.UL.H203.25.04.D	SEW cable type E/2.5	SEW
CF280.UL.H204.15.04.D	SEW cable type D/1.5	SEW
CF280.UL.H206.40.04.D	SEW cable type D/4.0	SEW
CF280.UL.H206.60.04.D	SEW cable type D/6.0	SEW
MOVILINK DDI		
CF280.UL.H207.15.04.D	MOVILINK DDI	SEW
CF280.UL.H207.25.04.D	MOVILINK DDI	SEW

[11)] Phase-out model
[15)] Colour outer jacket: Jet black (RAL 9005)

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

Further cable types ▶ Page 302

EPLAN download, configurators ▶ www.igus.eu/CF280ULH

EU2024

PVC | iguPUR | **PUR** | TPE

Hybrid servo cable | PUR | chainflex® CF280.UL.H

Class 4.2.3.1

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Oil resistance	none	1	2	**3**	4	highest		
Torsion	none	**1**	2	3	4	±360°		

CF280.UL.H
PUR
10 x 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]
SINAMICS S210				
CF280.UL.H300.03.04.D	(4G0.34+(2x0.34)C +(4xAWG26)C)C	10.0	78	130
CF280.UL.H301.07.04.D	(4G0.75+(2x0.5)C +(4xAWG26)C)C	11.0	99	151
CF280.UL.H304.15.04.D	(4G1.5+(2x1.5)C +(4xAWG26)C)C	13.0	159	236
CF280.UL.H304.25.04.D	(4G2.5+(2x1.5)C +(4xAWG26)C)C	14.5	205	286
IndraDrive				
CF280.UL.H400.25.05.D	(5x2.5+(5x0,35) +(4xAWG22)C)C	15.5	222	338
ctrlX DRIVE				
CF280.UL.H401.07.04.D	(4G0.75+(2x0.5)C +(4xAWG24)C)C	12.5	106	193
HEIDENHAIN				
CF280.UL.H501.15.04.D	(4G1.5+(2x0.75)C +(2x2x0.14+2x0.25)C)C	13.5	150	240
CF280.UL.H502.40.04.D	(4G4.0+(2x1.0)C +(2x2x0.14+2x0.25)C)C	16.5	266	378

Part No.	Hybrid technology	Hybrid manufacturer
SINAMICS S210		
CF280.UL.H300.03.04.D	SINAMICS S210	Siemens
CF280.UL.H301.07.04.D	SINAMICS S210	Siemens
CF280.UL.H304.15.04.D	SINAMICS S210	Siemens
CF280.UL.H304.25.04.D	SINAMICS S210	Siemens
IndraDrive		
CF280.UL.H400.25.05.D	IndraDrive	Bosch Rexroth
ctrlX DRIVE		
CF280.UL.H401.07.04.D	ctrlX DRIVE	Bosch Rexroth
HEIDENHAIN		
CF280.UL.H501.15.04.D	HEIDENHAIN	B&R
CF280.UL.H502.40.04.D	HEIDENHAIN	B&R

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

Further cable types ▶ Page 300

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

Order example: CF280.UL.H101.10.04 – to your desired length (0.5m steps)
CF280.UL.H **chainflex® series** .101.10.04 **Code hybrid bus element**

Order online ▶ www.igus.eu/CF280ULH

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

EPLAN download, configurators ▶ www.igus.eu/CF280ULH

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