

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

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
- 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
	a max.	gliding	2m/s
	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)

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°

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/CF280ULH
	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
	UKCA	In accordance with the valid regulations of the United Kingdom (as at 08/2021)
	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. [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



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



Example image

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



EU2023

EU2023

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

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® chainflex® CF280.UL.H

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	110	200
CF280.UL.H101.10.04.D	(4G1.0+(2x0.75)C)+(2xAWG22)C)C	12.0	133	205
CF280.UL.H101.15.04.D	(4G1.5+(2x0.75)C)+(2xAWG22)C)C	13.0	156	215
CF280.UL.H102.25.04.D	(4G2.5+(2x1.0)C)+(2xAWG22)C)C	14.5	203	324
CF280.UL.H102.40.04.D ¹¹⁾	(4G4.0+(2x1.0)C)+(2xAWG22)C)C	16.5	281	431
CF280.UL.H102.60.04.D	(4G6.0+(2x1.0)C)+(2xAWG22)C)C	17.5	364	499
SEW cable type A, B, C, D, E				
CF280.UL.H200.15.07.D ¹⁵⁾	(7x1.5+(2x0.75)C)C	16.0	202	354
CF280.UL.H200.25.07.D ¹⁵⁾	(7x2.5+(2x0.75)C)C	20.0	289	521
CF280.UL.H201.15.04.D ¹⁵⁾	4G1.5+(2x0.75)C+(3x0.75)C	14.0	139	272
CF280.UL.H201.25.04.D ¹⁵⁾	4G2.5+(2x0.75)C+(3x0.75)C	14.5	183	318
CF280.UL.H203.15.04.D	(4G1.5+(3x1.0)C)C	12.0	158	253
CF280.UL.H203.25.04.D	(4G2.5+(3x1.0)C)C	13.5	197	277
CF280.UL.H204.15.04.D	(4G1.5+(2x0.75)C+(3x1.0)C)C	15.0	200	340
CF280.UL.H206.40.04.D	(4G4.0+(2x0.75)C+(3x1.5)C)C	17.5	339	482
CF280.UL.H206.60.04.D	(4G6.0+(2x0.75)C+(3x1.5)C)C	19.0	431	648
MOVILINK DDI				
CF280.UL.H207.15.04.D	(4G1.5+2x(2x1.0)C+HF50-0.9/2.95)C	15.5	191	303
CF280.UL.H207.25.04.D	(4G2.5+2x(2x1.0)C+HF50-0.9/2.95)C	16.5	232	351

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

Class 4.2.3.1

Part No.	Hybrid technology	Hybrid manufacturer
SICK (HIPERFACE DSL)		
CF280.UL.H100.07.04.D	SICK (HIPERFACE DSL)	please see selection table on page 278
CF280.UL.H101.10.04.D	SICK (HIPERFACE DSL)	please see selection table on page 278
CF280.UL.H101.15.04.D	SICK (HIPERFACE DSL)	please see selection table on page 278
CF280.UL.H102.25.04.D	SICK (HIPERFACE DSL)	please see selection table on page 278
CF280.UL.H102.40.04.D ¹¹⁾	SICK (HIPERFACE DSL)	please see selection table on page 278
CF280.UL.H102.60.04.D	SICK (HIPERFACE DSL)	please see selection table on page 278
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

Further cable types ► Page 310

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

308 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



309

igus® chainflex® CF280.UL.H

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	74	139
CF280.UL.H301.07.04.D	(4G0.75+(2x0.5)C +(4xAWG26)C)C	11.0	100	169
CF280.UL.H304.15.04.D	(4G1.5+(2x1.5)C +(4xAWG26)C)C	13.0	170	240
CF280.UL.H304.25.04.D	(4G2.5+(2x1.5)C +(2xAWG26)C)C	14.5	215	289
IndraDrive				
CF280.UL.H400.25.05.D	(5x2.5+(5x0.35) +(4xAWG22)C)C	17.0	240	389
ctrlX DRIVE				
New CF280.UL.H401.07.04.D	(4G0.75+(2x0.5)C +(4xAWG24)C)C	13.0	144	220
HEIDENHAIN				
CF280.UL.H501.15.04.D	(4G1.5+(2x0.75)C +(2x2x0.14+2x0.25)C)C	15.0	181	281
CF280.UL.H502.40.04.D	(4G4.0+(2x1.0)C +(2x2x0.14+2x0.25)C)C	16.5	295	407

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 308



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



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

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

310 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

311



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

