

PUR Hybrid Servo cable | CF280-UL-H

- For medium mechanical load requirements
- PUR outer jacket
- Shielded
- Oil-resistant and coolant-resistant
- Notch-resistant
- Flame-retardant
- Hydrolysis/microbe-resistant
- PVC-free/halogen-free

Dynamic Information

	Bend radius	E-Chain®	min. 10 x d
		flexible	min. 8 x d
		fixed	min. 5 x d
	Temperature	E-Chain®	-13 °F to +176 °F (-25 °C to +80 °C)
		flexible	-40 °F to +176 °F (-40 °C to +80 °C)
		fixed	-58 °F to +176 °F (-50 °C to +80 °C)
	v max.	unsupported	32.81 ft/s (10 m/s)
		gliding	6.56 ft/s (2 m/s)
	a max.		164.1 ft/s² (50 m/s²)
	Travel distance	Unsupported travel distances and for gliding applications up to 32.81 ft (10 m), Class 2	

Cable structure

	Conductors	Conductor consisting of bare copper wires (according to EN 60228).
	Conductor insulation	Mechanically high-quality, especially low-capacitance TPE mixture.
	Conductor construction	Power conductors and Signal Pairs cabled with short pitch.
	Color code	Power conductors: Black with white numbers, one conductor green-yellow. 1. U / L1 / C / L+ 2. V / L2 3. W / L3 / D / L- Control pair: Black with white numbers. 1. Control Pair Printed 5 and 6 Bus element: white, blue
	Signal Pair shield	Bending-resistant braiding made of tinned copper wires.
	Intermediate layer	Foil taping over the external layer.
	Overall shield	Bending-resistant tinned copper braid. 80 % optical coverage
	Outer jacket	Low-adhesion mixture on the basis of PUR, adapted to suit the requirements in E-Chains® (following DIN VDE 0282 Part 10). Color: Orange (similar to RAL 2003) Color: Orange (similar to RAL 2003)

Electrical Information

	Nominal voltage	1000 V
	Test voltage	4000 V (following DIN EN 50396)

Requirements	low	1	2	3	4	5	6	7	highest
Travel distance	unsupported	1	2	3	4	5	6	1,312 ft +	
Oil resistance	none	1	2	3	4	highest			
Torsion	none	1	2	3	±180°				

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 2009
	Flame resistance	According to IEC 60332-1-2, CEI 20-35, FT1, VW-1
	Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
	Halogen-free	Following EN 50267-2-1
	UL/CSA	Style 10989 and 21223, 1000 V, 80 °C
	NFPA 79	Complies to NFPA 79-2015 chapter 12.9
	EAC	Certified according to no. TC RU C-DE.ME77.B.01255
	CTP	Certified according to no. C-DE.PB49.B.00420
	CEI	Following CEI 20-35
	Lead-free	Following 2011/65/EC (RoHS-II)
	Cleanroom	According to ISO Class 1. Outer jacket material complies with CF27-07-05-02-01-D, tested by IPA according to standard 14644-1
	DESINA	According to VDW, DESINA standardisation
	CE	Following 2014/35/EC

Guaranteed lifetime according to guarantee conditions (Page 22-25)

Cycles*	Temperature, from/to [°F]	v max. [ft/s]		a max. [ft/s²]	Travel distance [ft]	5 million	7.5 million	10 million
		unsupported	gliding			R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
-13 / +5					≤ 32.81	12.5	13.5	14.5
+5 / +158		32.81	6.56	164.05		10	11	12
+158 / +176						12.5	13.5	14.5

* Higher number of cycles possible - please ask for your individual calculation.

Typical application areas

- For medium mechanical load requirements
- Almost unlimited resistance to oil
- Indoor and outdoor applications without direct sun radiation
- Unsupported travel distances and for gliding applications up to 32.81 ft (10 m)
- Machining units/machine tools, low temperature applications



Image exemplary.

1,244 types from stock ... no cutting costs*
... no minimum order quantity ... *(up to 10 cuts of the same part number)

36 months guarantee on every chainflex® cable ...
... up to 10 million cycles guaranteed ...

IGUS® CHAINFLEX® CF280.UL.H

Image exemplary.

Part No.	AWG	Number of Conductors and rated cross section [mm²]	Outer diameter max.		Copper index		Weight		Part No.	Hybrid technology	Manufacturer
			in.	mm	lbs/mft	kg/km	lbs/mft	kg/km			
CF280-UL-H100-07-04-D ¹⁾	18	4 G 0.75	0.47	12.0	78.6	117	139.1	207	CF280-UL-H100-07-04-D	Sick "Hiperface DSL"	see selection table on page 279
	22	1 STP x 0.34									
	22	1 STP x 22AWG									
CF280-UL-H101-10-04-D	17	4 G 1.0	0.49	12.5	93.4	139	156.6	233	CF280-UL-H101-10-04-D	Sick "Hiperface DSL"	see selection table on page 279
	18	1 STP x 0.75									
	22	1 STP x 22AWG									
CF280-UL-H101-15-04-D	16	4 G 1.5	0.53	13.5	106.8	159	186.8	278	CF280-UL-H101-15-04-D	Sick "Hiperface DSL"	see selection table on page 279
	18	1 STP x 0.75									
	22	1 STP x 22AWG									
CF280-UL-H102-25-04-D	14	4 G 2.5	0.59	15.0	145.8	217	227.1	338	CF280-UL-H102-25-04-D	Sick "Hiperface DSL"	see selection table on page 279
	17	1 STP x 1.0									
	22	1 STP x 22AWG									
New CF280-UL-H102-60-04-D	10	4 G 6.0	0.71	18.0	264.8	394	395.8	589	CF280-UL-H102-60-04-D	Sick "Hiperface DSL"	see selection table on page 279
	17	1 STP x 1.0									
	22	1 STP x 22AWG									
CF280-UL-H200-15-07-D	16	7 G 1.5	0.65	16.5	145.1	216	247.3	368	CF280-UL-H200-15-07-D	SEW	SEW
	18	1 STP x 0.75									
New CF280-UL-H200-25-07-D ¹⁾	14	7 G 2.5	0.79	20.0	207.0	308	362.9	540	CF280-UL-H200-25-07-D	SEW	SEW
	18	1 STP x 0.75									
CF280-UL-H201-15-04-D	16	4 G 1.5	0.55	14.0	99.5	148	188.8	281	CF280-UL-H201-15-04-D	SEW	SEW
	18	1 STP x 0.75									
	18	3 x 0.75 SHLD									
CF280-UL-H201-25-04-D ¹⁾	14	4 G 2.5	0.59	15.0	131.0	195	221.7	330	CF280-UL-H201-25-04-D	SEW	SEW
	18	1 STP x 0.75									
	18	3 x 0.75 SHLD									
CF280-UL-H203-15-04-D	16	4 G 1.5	0.47	12.0	113.6	169	177.4	264	CF280-UL-H203-15-04-D	SEW	SEW
	17	3 x 1.0 SHLD									
CF280-UL-H203-25-04-D	14	4 G 2.5	0.55	14.0	138.4	206	217.0	323	CF280-UL-H203-25-04-D	SEW	SEW
	17	3 x 1.0 SHLD									
CF280-UL-H204-15-04-D	16	4 G 1.5	0.59	15.0	143.8	214	237.9	354	CF280-UL-H204-15-04-D	SEW	SEW
	18	1 STP x 0.75									
	17	3 x 1.0 SHLD									
CF280-UL-H206-60-04-D	10	4 G 6.0	0.77	19.5	309.1	460	454.9	677	CF280-UL-H206-60-04-D	SEW	SEW
	18	1 STP x 0.75									
	16	3 x 1.5 SHLD									
New CF280-UL-H501-15-04-D	16	4 G 1.5	0.59	15.0	129.7	193	196.9	293	CF280-UL-H501-15-04-D	SEW	B&R
	18	1 STP x 0.75									
	26	(2 PR x 0.14 +									
	24	1 PR x 0.25) SHLD									
New CF280-UL-H502-40-04-D	12	4 G 4.0	0.67	17.0	211.7	315	286.9	427	CF280-UL-H502-40-04-D	SEW	B&R
	17	1 STP x 1.0									
	26	(2 PR x 0.14 +									
	24	1 PR x 0.25) SHLD									
New CF280-UL-H601-25-05 ¹⁶⁾	14	5 G 2.5	0.57	14.5	113.6	169	201.6	300	CF280-UL-H601-25-05	SEW	ELAU/Schneider Electric
	24	24AWG QUAD SHLD									
	24	1 STP x 0.25 SHLD									

¹⁾ Delivery time upon request

¹⁶⁾ Colour outer jacket: Yellow-green (RAL 6018)

Note: The mentioned outer diameters are maximum values.

G = with green-yellow earth conductor x = without earth conductor

STP = Individually shielded Twisted Pair
SC = Individually shielded Conductor

PR = Twisted Pair
SHLD = Shielded Precable

