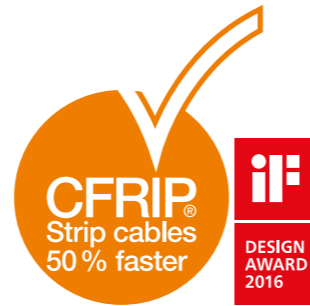


Requirements	low	1	2	3	4	5	6	7	highest
Travel distance	unsupported	1	2	3	4	5	6	7	1,312 ft +
Oil resistance	none	1	2	3	4	highest			
Torsion	none	1	2	3	±180°				

PVC Motor cable | CF31

- For high mechanical load requirements
- PVC outer jacket
- Shielded
- Oil-resistant
- Flame-retardant



Dynamic Information

	Bend radius	E-Chain®	min. 7.5 x d
	flexible		min. 6 x d
	fixed		min. 4 x d
	Temperature	E-Chain®	+41 °F to +158 °F (+5 °C to +70 °C)
		flexible	+23 °F to +158 °F (-5 °C to +70 °C)
		fixed	+5 °F to +158 °F (-15 °C to +70 °C)
	v max.	unsupported	32.81 ft/s (10 m/s)
		gliding	16.41 ft/s (5 m/s)
	a max.		262.5 ft/s² (80 m/s²)
	Travel distance	Unsupported travel distances and for gliding applications up to 328 ft (100 m), Class 5	

Cable structure

	Conductors	16-10 AWG: Conductor consisting of bare copper wires (according to EN 60228). 8-2/0 AWG: Conductor cable consisting of pre-leads (following EN 60228).
	Conductor insulation	Mechanically high-quality, especially low-capacitance TPE mixture.
	Core construction	Conductors cabled with short pitch length around a high-tensile strength core.
	Color code	Black with white numbers, one conductor green-yellow.. 1. U / L1 / C / L+ 2. V / L2 3. W / L3 / D / L- 4. 4 / N 5. green/yellow
	Inner jacket	PVC mixture adapted to suit the requirements in E-Chains®.
	Overall shield	Extremely bending-resistant tinned copper braid. 90 % optical coverage
	Outer jacket	Low-adhesion, oil-resistant mixture on the basis of PVC, adapted to suit the requirements in E-Chains® (following DIN VDE 0281 Part 13). Color: Jet black (similar to to RAL 9005)
	CFRIP®	Strip cables 50% faster: The tear strip is in the inner jacket Video ▶ www.igus.com/CFRIP

Configurators ▶ www.igus.com/CF31

Class 5.5.2.1

Electrical Information

	Nominal voltage	1000 V
	Test voltage	4000 V (following DIN EN 50396)
Properties and approvals		
	UV resistance	Medium
	Oil resistance	Oil-resistant (following DIN EN 50363-4-1), Class 2
	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)
	UL/CSA	Style 10492 and 2570, 1000 V, 80 °C
	NFA	
	NFA 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 2. Outer jacket material complies with CF5-10-07, tested by IPA according to standard 14644-1
	CE	Following 2014/35/EC

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

Cycles*		5 million			7.5 million		10 million	
Temperature, from/to [°F]	v max. [ft/s]	a max. [ft/s²]	Travel distance [ft]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]	R min. [factor x d]
+41 / +59				10	11	12		
+59 / +140	32.81	16.41	262.48	≤ 328.1	7.5	8.5	9.5	
+140 / +158					10	11	12	

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

Typical application areas

- For high mechanical load requirements
- Light oil influence
- Preferably indoor applications, can be used in outdoor applications with temperatures > 23 °F
- Unsupported travel distances and for gliding applications up to 328 ft (100 m)
- Storage and retrieval units for high-bay warehouses, machining units/packages machines, quick handling, indoor cranes



PVC Motor cable | CF31

Class 5.5.2.1

Requirements
Travel distance
Oil resistance
Torsion

low	1	2	3	4	5	6	7	highest
unsupported	1	2	3	4	5	6	1,312 ft +	
none	1	2	3	4	highest			
none	1	2	3	±180°				

Strip cables 50% faster!



Image exemplary.

Part No.	AWG	Number of Conductors and rated cross section [mm ²]	Outer diameter max.		Copper index		Weight	
			in.	mm	lbs/mft	kg/km	lbs/mft	kg/km
CF31-15-04	16	4 G 1.5	0.41	10.5	63.2	94	112.9	168
CF31-25-04	14	4 G 2.5	0.47	12.0	95.4	142	156.6	233
CF31-25-05	14	5 G 2.5	0.51	13.0	116.9	174	198.2	295
CF31-40-04	12	4 G 4.0	0.53	13.5	145.8	217	231.8	345
CF31-40-05	12	5 G 4.0	0.59	15.0	188.8	281	284.9	424
CF31-60-04	10	4 G 6.0	0.63	16.0	213.7	318	327.9	488
CF31-60-05	10	5 G 6.0	0.71	18.0	258.7	385	401.8	598
CF31-100-04	8	4 G 10.0	0.81	20.5	362.2	539	559.8	833
CF31-100-05	8	5 G 10.0	0.89	22.5	461.6	687	641.1	954
CF31-160-04	6	4 G 16.0	0.93	23.5	553.0	823	757.3	1127
CF31-250-04	4	4 G 25.0	1.12	28.5	842.6	1254	1154.4	1718
CF31-350-04	2	4 G 35.0	1.28	32.5	1153.1	1716	1544.2	2298
CF31-500-04	1	4 G 50.0	1.48	37.5	1626.2	2420	2132.2	3173
CF31-700-04	2/0	4 G 70.0	1.69	43.0	2321.0	3454	2745.0	4085

Note: The mentioned outer diameters are maximum values.
G = with green-yellow earth core x = without earth core



Order example: **CF31-25-04** – In your desired length
CF31 Chainflex® series -25 Code nominal cross section -04 Number of conductors



Online order ► www.chainflex.com/CF31



Delivery time 24hr or today.
Delivery time means time until shipping of goods.



Configurators ► www.igus.com/CF31

