



# TPE Control Cables

## Chainflex® CF10-UL

**TPE Energy Chain® cable, shielded, oil-resistant, bio-oil-resistant, flame retardant, UV-resistant, low temperature flexibility**

**Conductor**  
Highly flexible special conductor

**Strain relief**  
Center core for high tensile strength

**Core**  
Bundles around high tensile strength core

**Inner jacket**  
Gusset filled pressure extruded

**Overall shield**  
Highly flexible braided copper shield

**Outer jacket**  
Pressure extruded, TPE blend

### Construction

**Conductors:** Bare copper conductors with very fine stranding. According to EN 60228

**Conductor insulation:** TPE, thin-walled version

**Conductor twisting:** Number of conductors < 12 Conductors concentrically layered with short pitch. Number of conductors ≥ 12 Conductors layered in braids around a high-tensile-strength core; short pitches matched in the direction of the pitch for extremely low torsion.

**Conductor colors:** Black with white numbers, one conductor green/yellow with cross-sections 18-12 AWG; 20-24 AWG DIN 47100.

**Intermediate jacket:** TPE

**Shield:** Tinned copper shield, coverage approx. 90% optical.

**Outer jacket:** TPE: particularly abrasion-resistant, high-flex blend, oil-resistant, coolant-resistant. Silicon-free in compliance with PV 3.10.7 - status 1992. **Color:** dark blue (RAL 5011).

### Technical Data

**Minimum bending radius, moving:** 5 x outer cable diameter

**Minimum bending radius, fixed:** 3 x outer cable diameter

**Permissible temperature, moving:** -31°F to +212°F (-35°C to +100°C)

**Permissible temperature, fixed:** -40°F to +212°F (-40°C to +100°C)

**UV resistance:** High

**Oil resistance:** High

**Flame resistance:** FT1

**Voltage:** 300V 24 AWG; 600V 20-12 AWG

**Regulations: cRUus:** UL AWM USA & Canada styles 21529 90°C 300V 20-24 AWG; 21530 90°C 600V 18-12 AWG

**NFPA 79:** Complies to NFPA 79 2012 chapter 12.9

**CE:** 2006/95/EG CEI: 20-35

**RoHS:** Complies to 2011/65/EU (RoHS-II)

**Cleanroom:** According to ISO Class 1, material/cable tested by IPA according to ISO standard 14644-1.

Test cable : CF34-25-04

### Typical Applications

- for maximum mechanical load requirements
- indoor and outdoor applications
- especially for unsupported and gliding travel distances up to 1312 ft (400m) and more.
- storage and retrieval units for high-bay warehouses, machining units/machine tools, quick handling, cleanroom, semiconductor insertion, ship-to-shore, outdoor cranes, low temperature applications



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CF10-UL

Price Index

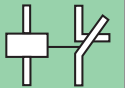


CLASS  
6.4.4

| Part No.      | AWG | No. of Conductors<br>and Rated Cross-<br>Section in mm <sup>2</sup> | Outer Diameter<br>(approx) |        | Copper Index |         | Weight  |         |
|---------------|-----|---------------------------------------------------------------------|----------------------------|--------|--------------|---------|---------|---------|
|               |     |                                                                     | in.                        | (mm)   | lbs/mft      | (kg/km) | lbs/mft | (kg/km) |
| CF10-UL-02-04 | 24  | 4 x 0.25                                                            | .28                        | (7)    | 16.8         | (25)    | 47.6    | (71)    |
| CF10-UL-02-08 | 24  | 8 x 0.25                                                            | .33                        | (8.5)  | 24.8         | (37)    | 67.7    | (101)   |
| CF10-UL-02-12 | 24  | 12 x 0.25                                                           | .39                        | (10)   | 42.2         | (63)    | 102.5   | (153)   |
| CF10-UL-05-04 | 20  | 4 x 0.5                                                             | .33                        | (8.5)  | 24.8         | (37)    | 67.7    | (101)   |
| CF10-UL-05-05 | 20  | 5 x 0.5                                                             | .33                        | (8.5)  | 28.8         | (43)    | 74.4    | (111)   |
| CF10-UL-05-12 | 20  | 12 x 0.5                                                            | .51                        | (13)   | 71.0         | (106)   | 172.9   | (258)   |
| CF10-UL-05-18 | 20  | 18 x 0.5                                                            | .59                        | (15)   | 97.8         | (146)   | 222.4   | (332)   |
| CF10-UL-05-25 | 20  | 25 x 0.5                                                            | .63                        | (16)   | 124.0        | (185)   | 275.4   | (411)   |
| CF10-UL-07-04 | 18  | 4 x 0.75                                                            | .35                        | (9)    | 32.8         | (49)    | 82.4    | (123)   |
| CF10-UL-07-05 | 18  | 5 x 0.75                                                            | .37                        | (9.5)  | 45.6         | (68)    | 100.5   | (150)   |
| CF10-UL-07-07 | 18  | 7 x 0.75                                                            | .43                        | (11)   | 60.3         | (90)    | 130.0   | (194)   |
| CF10-UL-07-12 | 18  | 12 x 0.75                                                           | .57                        | (14.5) | 95.8         | (143)   | 225.1   | (336)   |
| CF10-UL-07-24 | 18  | 24 x 0.75                                                           | .75                        | (19)   | 184.9        | (276)   | 387.3   | (578)   |
| CF10-UL-10-03 | 17  | 3 x 1                                                               | .35                        | (9)    | 32.2         | (48)    | 80.4    | (120)   |
| CF10-UL-10-04 | 17  | 4 x 1                                                               | .37                        | (9.5)  | 47.6         | (71)    | 103.9   | (155)   |
| CF10-UL-10-05 | 17  | 5 x 1                                                               | .41                        | (10.5) | 55.6         | (83)    | 116.6   | (174)   |
| CF10-UL-10-07 | 17  | 7 x 1.0                                                             | .47                        | (12)   | 74.4         | (111)   | 154.1   | (230)   |
| CF10-UL-10-12 | 17  | 12 x 1                                                              | .57                        | (14.5) | 114.6        | (171)   | 247.9   | (370)   |
| CF10-UL-10-18 | 17  | 18 x 1                                                              | .75                        | (19)   | 183.6        | (274)   | 322.0   | (473)   |
| CF10-UL-10-24 | 17  | 24 x 1.0                                                            | .85                        | (21.5) | 231.8        | (346)   | 475.0   | (709)   |
| CF10-UL-15-04 | 16  | 4 x 1.5                                                             | .41                        | (10.5) | 63.0         | (94)    | 128.6   | (192)   |
| CF10-UL-15-05 | 16  | 5 x 1.5                                                             | .43                        | (11)   | 144.1        | (215)   | 75.0    | (112)   |
| CF10-UL-15-07 | 16  | 7 x 1.5                                                             | .51                        | (13)   | 99.8         | (149)   | 186.9   | (279)   |
| CF10-UL-15-12 | 16  | 12 x 1.5                                                            | .69                        | (17.5) | 162.8        | (243)   | 340.4   | (508)   |
| CF10-UL-15-18 | 16  | 18 x 1.5                                                            | .85                        | (21.5) | 251.3        | (375)   | 485.1   | (724)   |
| CF10-UL-25-04 | 14  | 4 x 2.5                                                             | .47                        | (12)   | 93.8         | (140)   | 179.6   | (268)   |
| CF10-UL-25-07 | 14  | 7 x 2.5                                                             | .59                        | (15)   | 152.1        | (227)   | 270.7   | (404)   |
| CF10-UL-25-12 | 14  | 12 x 2.5                                                            | .85                        | (21.5) | 270.7        | (404)   | 538.7   | (804)   |
| CF10-UL-40-04 | 12  | 4 x 4                                                               | .53                        | (13.5) | 138.0        | (206)   | 247.2   | (369)   |

NOTE: The mentioned external diameters are maximum values.

Internet: [www.igus.com](http://www.igus.com)  
email: [sales@igus.com](mailto:sales@igus.com)  
RFQ: [www.chainflex.com/rfq](http://www.chainflex.com/rfq)



No Minimum Order • No Cut Charges on up to 10 cuts of the same part number