

Data Cables

Bus Cables Fiber Optic Cables Feedback Cables



PVC Data Cables

Chainflex® CF240

PVC Energy Chain® data cable, shielded, oil-resistant, flame-retardant



Conductor
Fine wire
conductor

Core
Cabled in layers
with extremely
short pitch

Overall shield
Highly flexible
braided copper
shield

Outer jacket
Pressure
extruded

Internet: <http://www.igus.com>
email: sales@igus.com
QuickSpec: <http://www.igus.com/qs/chainflex.asp>



Construction

Conductors: Finely stranded bare copper conductor with extreme flexibility.

Conductor insulation: Mechanically tough PVC

Conductor twisting: Conductors twisted with short pitch, layered around polymer core.

Conductor colors: Color code DIN 47100

Shield: Tinned copper braid, coverage approx. 90% optical.

Outer jacket: PVC-based, low-adhesion blend, adapted to the requirements of the Energy Chain®, oil-resistant. Silicon-free in compliance with PV 3.10.7 - status 1992. **Color:** grey (RAL 7001)

Technical Data

Minimum bending radius, moving: <10m travel = 10 x outer diameter; ≥10m travel = 12 x outer diameter,

Minimum bending radius, fixed: 5 x outer cable diameter

Permissible temperature, moving: +23°F to +158°F (-5°C to +70°C)

Permissible temperature, fixed: -4°F to +158°F (-20°C to +70°C)

Flame resistance: FT1

Oil-resistance: Medium

Voltage: 300V

Test Voltage: 1500V

Regulations: cRUus AWM: UL AWM for USA and Canada style 2464 80°C, CE, VDE, RoHS: 2002/95/EC; Please reference the Design Section (Chapter 1) for more information.

Typical Applications

- for medium mechanical load requirements
- preferably indoor applications, outdoor is acceptable for temperatures greater than +41°F (+5°C)
- especially for freely suspended travel and gliding travel up to 164 ft (50m)
- storage and retrieval units for high-bay warehouses, machining units/packages machines, handling, indoor cranes

Part No.	AWG	No. of Conductors and Rated Cross- Section in mm ²	Outer Diameter (approx) in. (mm)	Copper Index		Weight	
				lbs/mft	(kg/km)	lbs/mft	(kg/km)
CF240-01-03	26	3 x 0.14	.18 (4.5)	11	(16)	24	(35)
CF240-01-04	26	4 x 0.14	.20 (5)	12	(18)	26	(38)
CF240-01-05	26	5 x 0.14	.22 (5.5)	14	(20)	29	(42)
CF240-01-07	26	7 x 0.14	.24 (6)	17	(25)	35	(51)
CF240-01-14	26	14 x 0.14	.28 (7)	29	(42)	52	(76)
CF240-01-18	26	18 x 0.14	.31 (8)	33	(48)	61	(90)
CF240-01-24	26	24 x 0.14	.33 (8.5)	41	(60)	77	(113)
CF240-02-03	24	3 x 0.25	.22 (5.5)	14	(21)	27	(40)
CF240-02-04	24	4 x 0.25	.22 (5.5)	16	(24)	33	(48)
CF240-02-05	24	5 x 0.25	.24 (6)	18	(27)	35	(52)
CF240-02-07	24	7 x 0.25	.28 (7)	24	(35)	45	(66)
CF240-02-14	24	14 x 0.25	.31 (8)	39	(57)	68	(100)
CF240-02-18	24	18 x 0.25	.35 (9)	48	(71)	83	(122)
CF240-02-24	24	24 x 0.25	.43 (11)	63	(92)	118	(174)
CF240-03-03	22	3 x 0.34	.22 (5.5)	16	(24)	31	(45)
CF240-03-04	22	4 x 0.34	.24 (6)	19	(28)	35	(51)
CF240-03-05	22	5 x 0.34	.26 (6.5)	22	(32)	39	(58)
CF240-03-07	22	7 x 0.34	.28 (7)	29	(43)	51	(75)
CF240-03-10	22	10 x 0.34	.33 (8.5)	37.4	(55)	74.8	(110)
CF240-03-14	22	14 x 0.34	.33 (8.5)	48	(71)	79	(116)
CF240-03-18	22	18 x 0.34	.35 (9)	59	(87)	95	(140)
CF240-03-24	22	24 x 0.34	.47 (12)	78	(115)	138	(203)

NOTE: The mentioned external diameters are maximum values.

PVC Data Cables

Chainflex® CF211

PVC Energy Chain® cable, shielded, twisted pair,
oil-resistant, flame-retardant



igus®

Price Index



CF211



ECONOMY

Construction

Conductors: Finely stranded bare copper conductor.

Conductor insulation: Mechanically tough PVC

Conductor twisting: Two conductors, each braided in a short pitch, conductor pairs are then twisted in short pitch around a polymer core.

Conductor colors: Color code DIN 47100

Shield: Tinned copper braid, coverage approx. 90% optical.

Outer jacket: PVC-based, low-adhesion blend, adapted to the requirements of the Energy Chain®, oil-resistant in accordance with VDE. Silicon-free in compliance with PV 3.10.7 - status 1992. **Color:** grey (RAL 7001)

Technical Data

Minimum bending radius, moving: 10 x outer cable diameter

Minimum bending radius, fixed: 5 x outer cable diameter

Permissible temperature, moving: +23°F to +158°F (-5°C to +70°C)

Permissible temperature, fixed: -4°F to +158°F (-20°C to +70°C)

Oil-resistance: Medium

Flame-resistance: FT1

Voltage: 300V

Test voltage: 1500V

Regulations: cRUus UL AWM for USA & Canada style 2464 80°C 300V, CE, RoHS: 2002/95/EC; Please reference the Design Section (Chapter 1) for more information.

Typical Applications

- for medium mechanical load requirements
- preferably indoor applications, outdoor is acceptable for temperatures greater than +41°F (+5°C)
- especially for freely suspended and gliding travel up to 328 ft (100m)
- storage and retrieval units for high-bay warehouses, machining units/packaging machines, handling, indoor cranes

Part No.	AWG	No. of Pairs and Rated Cross- Section in mm²	Outer Diameter (approx)		Copper Index		Weight	
			in.	(mm)	lbs/mft	(kg/km)	lbs/mft	(kg/km)
CF211-02-01-02	24	1 PR x 0.25	.20	(5)	10.9	(16)	23.8	(35)
CF211-02-02-02	24	2 PR x 0.25	.28	(7)	19.0	(28)	40.8	(60)
CF211-02-03-02	24	3 PR x 0.25	.30	(7.5)	25.2	(37)	49.6	(73)
CF211-02-04-02	24	4 PR x 0.25	.31	(8)	29.9	(44)	57.8	(85)
CF211-02-05-02	24	5 PR x 0.25	.33	(8.5)	34.7	(51)	66.0	(97)
CF211-02-06-02	24	6 PR x 0.25	.37	(9.5)	39.4	(58)	74.8	(110)
CF211-02-08-02	24	8 PR x 0.25	.45	(11.5)	51.0	(75)	108.8	(160)
CF211-02-10-02	24	10 PR x 0.25	.51	(13)	63.2	(93)	132.6	(195)
CF211-02-14-02	24	14 PR x 0.25	.53	(13.5)	74.1	(109)	139.4	(205)
CF211-03-03-02	22	3 PR x 0.34	.31	(8)	25.2	(37)	53.7	(79)
CF211-05-01-02	20	1 PR x 0.5	.22	(5.5)	15.6	(23)	34.0	(50)
CF211-05-02-02	20	2 PR x 0.5	.31	(8)	29.9	(44)	54.4	(80)
CF211-05-03-02	20	3 PR x 0.5	.35	(9)	38.8	(57)	68.0	(100)
CF211-05-04-02	20	4 PR x 0.5	.37	(9.5)	46.2	(68)	81.6	(120)
CF211-05-05-02	20	5 PR x 0.5	.43	(11)	54.4	(80)	98.6	(145)
CF211-05-06-02	20	6 PR x 0.5	.49	(12.5)	67.3	(99)	125.8	(185)
CF211-05-08-02	20	8 PR x 0.5	.55	(14)	84.3	(124)	156.4	(230)
CF211-05-10-02	20	10 PR x 0.5	.63	(16)	119.0	(175)	217.6	(320)
CF211-05-14-02	20	14 PR x 0.5	.67	(17)	127.1	(187)	227.8	(335)

PR = Twisted Pair

NOTE: The mentioned external diameters are maximum values.



Conductor
Fine-wire
conductor

Strain relief
Center core for
high tensile
stresses

Core
Pairs twisted together
with short pitch

Overall shield
Highly flexible
braided copper
shield

Outer jacket
Pressure
extruded

PDF: www.igus.com/pdf/chainflex.asp
Specs/CAD/RFQ: www.igus.com/chainflex.asp
RoHS info: www.igus.com/RoHS.asp

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

TPE Data Cables

Chainflex® CF11

TPE Energy Chain cable, shielded, oil-resistant, bio-oil-resistant, PVC-free, halogen-free, UV-resistant



igus®

Price Index



Construction

Conductors: Finely stranded bare copper conductor with extreme flexibility. According to EN 60228

Conductor insulation: TPE, thin-walled version

Conductor twisting: Two conductors, each twisted in a short pitch, conductor pairs are then twisted in short pitch around a polymer core.

Conductor colors: Color code DIN 47100 up to 18 AWG, 17-14 AWG are black with white printed numbers.

Intermediate jacket: TPE blend, adapted to the requirements of the Energy Chain®.

Shield: Tinned copper braid, coverage approx. 90% optical.

Outer jacket: TPE: particularly abrasion-resistant, high-flex blend, oil-resistant, coolant-resistant. Color: dark blue (RAL 5011).

Technical Data

Minimum bending radius, moving: 10 x outer cable diameter

Minimum bending radius, fixed: 5 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

Voltage: 300V

Test voltage: 1500V

Regulations: CE, RoHS: 2002/95/EC; Please reference the Design Section (Chapter 1) for more information.

Typical Applications

- for maximum mechanical load requirements
- indoor and outdoor applications, UV-resistant
- especially for freely suspended and gliding travel up to 1312 ft (400m)
- 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

Part No.	AWG	No. of Pairs and Rated Cross- Section in mm²	Outer Diameter (approx)		Copper Index		Weight	
			in.	(mm)	lbs/mft	(kg/km)	lbs/mft	(kg/km)
CF11-01-04-02	26	4 PR x 0.14	.28	(7)	18.8	(28)	43	(64)
CF11-01-18-02	26	18 PR x 0.14	.55	(14)	58.5	(86)	111.5	(164)
CF11-02-02-02	24	2 PR x 0.25	.28	(7)	20.4	(30)	34.0	(50)
CF11-02-03-02	24	3 PR x 0.25	.35	(9)	23.1	(34)	40.8	(60)
CF11-02-04-02	24	4 PR x 0.25	.35	(9)	29.9	(44)	54.4	(80)
CF11-02-05-02	24	5 PR x 0.25	.35	(9)	37.4	(55)	68.0	(100)
CF11-02-09-02	24	9 PR x 0.24	.49	(12.5)	62	(92)	133	(198)
CF11-02-10-02	24	10 PR x 0.25	.51	(13)	67.3	(99)	136	(200)
CF11-03-08-02	22	8 PR x 0.34	.49	(12.5)	61.2	(90)	104.7	(154)
CF11-05-04-02	20	4 PR x 0.5	.39	(10)	61.9	(91)	73.4	(108)
CF11-05-06-02	20	6 PR x 0.5	.51	(13)	64.6	(95)	129.2	(190)
CF11-05-08-02	20	8 PR x 0.5	.55	(14)	88	(131)	167	(250)
CF11-07-03-02	18	3 PR x 0.75	.43	(11)	52.4	(77)	89.1	(131)
CF11-10-04-02	17	4 PR x 1.0	.47	(12)	82.3	(121)	122.4	(180)
CF11-15-06-02	16	6 PR x 1.5	.67	(17)	164.6	(242)	284.9	(419)
CF11-25-03-02	14	3 PR x 2.5	.65	(16.5)	142.8	(210)	278.8	(410)

PR = Twisted Pair

NOTE: The mentioned external diameters are maximum values.

Conductor
Fine wire
stranded
conductor

Core
Pairs twisted together
with short pitch

Inner jacket
Gusset filled,
pressure
extruded

Overall shield
Highly flexible
braided copper
shield

Outer jacket
Pressure extruded,
halogen-free TPE
blend

Internet: <http://www.igus.com>
email: sales@igus.com
QuickSpec: <http://www.igus.com/qs/chainflex.asp>

TPE Data Cables

Chainflex® CF12

TPE Energy Chain® cable, double-shielded,
oil-resistant, bio-oil-resistant, PVC-free/halogen-free,
UV-resistant



igus®
Price Index



CF12



PREMIUM

Construction

Conductors: Finely stranded bare copper conductor with extreme flexibility. According to EN 60228

Conductor insulation: TPE thin-wall version

Conductor twisting: Two conductors, each braided in a short pitch, conductor pairs are then braided in short pitch around a polymer core.

Pair shielding: Tinned copper braid

Pair insulation: Each conductor pair covered individually with TPE over the pair shielding.

Conductor colors: Color code DIN 47100 for 24 AWG. 20AWG and 17AWG Black with printed white numbers

Intermediate jacket: TPE blend, adapted to the requirements of the Energy Chain®.

Shield: Galvanized steel wire braid. 90% optical coverage.

Outer jacket: TPE: particularly abrasion-resistant, high-flex blend, oil-resistant, coolant-resistant. Color: dark blue (RAL 5011).

Technical Data

Minimum bending radius, moving: 10 x outer cable diameter

Minimum bending radius, fixed: 5 x outer cable diameter

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

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

UV resistance: High

Oil resistance: High

Voltage: 300V

Test voltage: 1500V

Regulations: CE, RoHS: 2002/95/EC; Please reference the Design Section (Chapter 1) for more information.

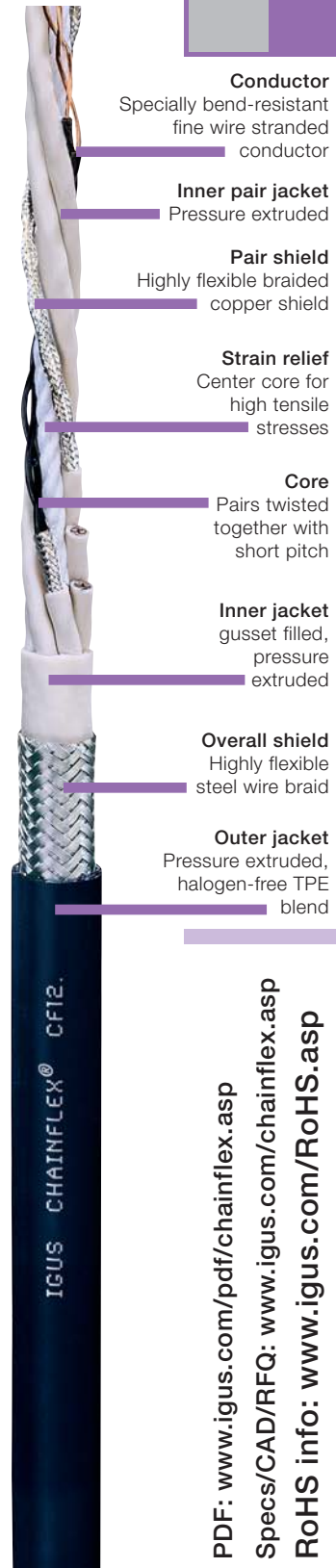
Typical Applications

- for maximum mechanical load requirements
- indoor and outdoor applications, UV-resistant
- especially for freely suspended and gliding travel up to 1312 ft (400m)
- storage and retrieval units for high-bay warehouses, machine tools, quick handling, cleanroom, semiconductor insertion, outdoor cranes, low temperature applications, high EMI resistance needed

Part No.	AWG	No. of Conductors and Rated Cross- Section in mm²	Outer Diameter (approx)		Copper Index		Weight	
			in.	(mm)	lbs/mft	(kg/km)	lbs/mft	(kg/km)
CF12-02-04-02	24	4 PR x 0.25	.47	(12)	50.3	(74)	91.8	(135)
CF12-05-03-02	20	3 PR x 0.5	.51	(13)	44.9	(66)	142.8	(210)
CF12-05-04-02	20	4 PR x 0.5	.55	(14)	59.8	(88)	173.4	(255)
CF12-05-05-02	20	5 PR x 0.5	.59	(15)	74.8	(110)	202.0	(297)
CF12-05-06-02	20	6 PR x 0.5	.67	(17)	89.8	(132)	244.8	(360)
CF12-05-08-02	20	8 PR x 0.5	.79	(20)	120.4	(177)	324.4	(477)
CF12-05-10-02	20	10 PR x 0.5	.87	(22)	150.3	(221)	372.6	(548)
CF12-05-14-02	20	14 PR x 0.5	.95	(24)	210.1	(309)	491.6	(723)
CF12-10-06-02	17	6 PR x 1.0	.79	(20)	134.6	(198)	368.6	(542)

PR = Twisted Pair

NOTE: The mentioned external diameters are maximum values.



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

PDF: www.igus.com/pdf/chainflex.asp
Specs/CAD/RFQ: www.igus.com/chainflex.asp
RoHS info: www.igus.com/RoHS.asp

**Conductor**

Fine wire
stranded
conductor

Core

2 conductors each
stranded with short
pitch

Inner jacket

gusset filled,
pressure
extruded

Overall shield

Highly flexible
braided copper
shield

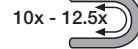
Outer jacket

Pressure extruded,
flame retardant
TPE blend

TPE Bus Cables

Chainflex® CFBUS

TPE Energy Chain® cable, shielded, flame retardant, oil-resistant, bio-oil-resistant



Price Index



Construction

Conductors: Extremely flexible, very finely stranded bare copper conductor. According to EN 60228.

Conductor insulation: According to Bus specifications

Conductor twisting: Two conductors each, twisted in a short pitch, conductor pairs also twisted in a short pitch.

Conductor colors: Please refer to Color Code Chart in the Design Section

Shield: Tinned copper braid. Coverage, 90% optical

Outer jacket: TPE blend, abrasion resistant, flame retardant adjusted to the requirements in Energy Chains®. Color Purple (RAL 4001)

Technical Data

Minimum bending radius, moving: 10 - 12.5 x outer cable diameter

Minimum bending radius, fixed: 5 x outer cable diameter

Permissible temperature, moving: -31°F to +158°F (-35°C to +70°C)

Permissible temperature, fixed: -40°F to +158°F (-40°C to +70°C)

UV resistance: Medium

Oil resistance: High

Nominal voltage: 30V

Test voltage: 500V

Regulations: cRUus: UL AWM style for US & Canada: 21371 80°C 30V **Flame Resistance:** FT1, CE, DESINA,

RoHS: 2002/95/EC; Please reference the Design Section (Chapter 1) for more information.

Typical Applications

- for maximum mechanical load requirements
- indoor and outdoor applications, UV-resistant
- especially for freely suspended and gliding travel up to 1312 ft (400m)
- 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

Internet: <http://www.igus.com>

email: sales@igus.com

QuickSpec: <http://www.igus.com/qs/chainflex.asp>

TPE Bus Cables

Chainflex® CFBUS

TPE Energy Chain® cable, shielded, flame retardant, oil-resistant, bio-oil-resistant



CFBUS



PREMIUM

Part No.	AWG	No. of Conductors and Rated Cross- Section in mm²	Outer Diameter (approx)		Copper Index		Weight		Characteristic Impedance
			in.	(mm)	lbs/mft	(kg/km)	lbs/mft	(kg/km)	ohms
Profibus (Bending radius 10 x D)									
CFBUS-001	24	1 PR x .25	.33	(8.5)	15.6	(23)	47.6	(70)	150
CFBUS-002	16	4 C x 1.5							
	24	1 PR x 0.25	.49	(12.5)	65.3	(96)	119.0	(175)	150
CFBUS-003	18	3 C x 0.75							
	24	1 PR x 0.25	.43	(11)	39.4	(58)	82.3	(121)	150
Interbus (Bending radius 10 x D)									
CFBUS-010	24	3 PR x 0.25	.33	(8.5)	28.6	(42)	56.4	(83)	100
CFBUS-011	24	3 PR x 0.25							
	17	3 C x 1.0	.39	(10)	50.3	(74)	91.8	(135)	100
CAN-BUS/Fieldbus (Bending radius 10 x D)									
CFBUS-020	24	2 PR x 0.25	.33	(8.5)	22.4	(33)	44.9	(66)	120
CFBUS-021	20	1 PR x 0.5	.33	(8.5)	24.5	(36)	52.4	(77)	120
CFBUS-022	20	2 PR x 0.5	.33	(8.5)	30.6	(45)	56.4	(83)	120
Devicenet (Bending radius 10 x D)									
CFBUS-030	24	1 PR 24 AWG							
	22	1 PR 22 AWG	.30	(7.5)	22.4	(33)	43.6	(65)	120
CFBUS-031	18	1 PR 18 AWG							
	15	1 PR 15 AWG	.45	(11.5)	65.3	(96)	74.8	(110)	120
CCLink (Bending radius 10 x D)									
CFBUS-035	20	3 C x 0.25	.34	(8.5)	30.0	(44)	132.3	(90)	110
Ethernet/CAT5 (Bending radius 12.5 x D)									
CFBUS-040	24	2 PR x 0.25	.28	(7.0)	22.4	(33)	29.2	(43)	100
CFBUS-041	24	4 PR x 0.25	.39	(10)	31.3	(46)	68.7	(101)	100
Ethernet/CAT6 (Bending radius 12.5 x D)									
CFBUS-050	24	4 STP x 0.14	.39	(10)	52.4	(77)	89.1	(131)	100
Firewire (Bending radius 12.5 x D)									
CFBUS-055	26	2 STP x 0.15							
	22	2 C x 0.34	.30	(7.5)	28.6	(42)	80.2	(118)	100
USB (Bending radius 12.5 x D)									
CFBUS-065	20	2 C x 0.5							
	28	1 PR x 0.08	.20	(5.0)	17.5	(26)	30.2	(45)	90
CFBUS-066	20	2 C x 0.5							
		1 PR x 0.24	.24	(6.0)	21.5	(32)	37.6	(56)	90

STP = Individually shielded Pair

PR = Twisted Pair

C = Single Conductor

SC = Individually shielded conductor

SHLD = Shielded over Precable

NOTE: The mentioned external diameters are maximum values.

PDF: www.igus.com/pdf/chainflex.asp
 Specs/CAD/RFQ: www.igus.com/chainflex.asp
 RoHS info: www.igus.com/RoHS.asp

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

TPE Bus Cables

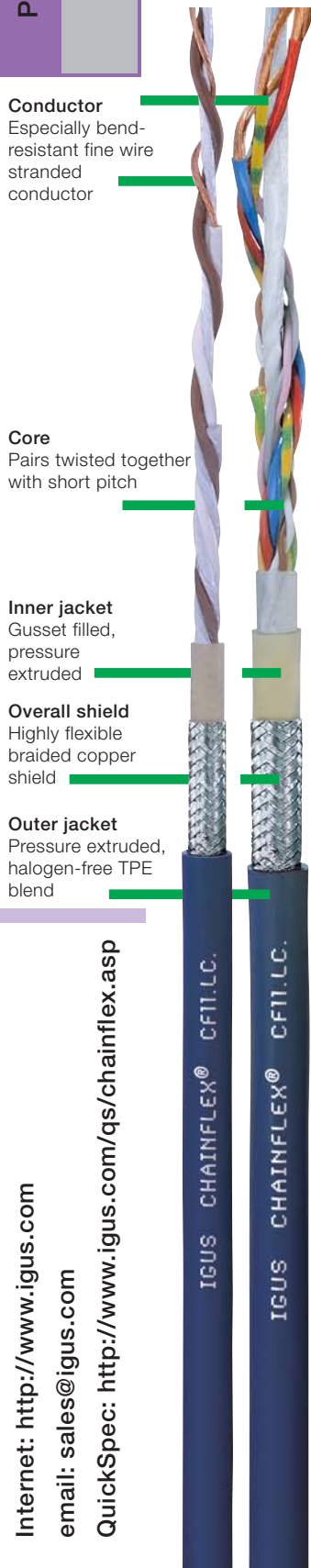
Chainflex® CF11-Low Capacitance

TPE Energy Chain® cable, shielded, oil-resistant, bio-oil-resistant, PVC-free, halogen-free, UV-resistant



igus®

Price Index



Construction

Conductors: Finely stranded bare copper conductor with extreme flexibility. According to EN 60228

Conductor insulation: Foamed polymer

Conductor colors: Color code DIN 47100

Intermediate jacket: TPE blend, adapted to the requirements of the Energy Chain®.

Shield: Tinned copper braid, coverage approx., 90% optical.

Outer jacket: TPE: particularly abrasion-resistant, high-flex blend, oil-resistant, coolant-resistant. Color: dark blue (RAL 5011).

Technical Data

Minimum bending radius, moving: 10 x outer cable diameter

Minimum bending radius, fixed: 5 x outer cable diameter

Permissible temperature, moving: -31°F to +158°F (-35°C to +70°C)

Permissible temperature, fixed: -40°F to +158°F (-40°C to +70°C)

UV resistance: Medium

Oil resistance: High

Voltage: 30V

Test voltage: 500V

Regulations: CE, RoHS: 2002/95/EC; Please reference the Design Section (Chapter 1) for more information.

Typical Applications

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

CAN-BUS Part No.	AWG	No. of Conductors and Rated Cross- Section in mm ²	Outer Diameter (approx)		Copper Index		Weight	
			in.	(mm)	lbs/mft	(kg/km)	lbs/mft	(kg/km)
CF11-05-01-02 LC	20	1 x 2 x 0.5	.33	(8.5)	24.5	(36)	39.4	(58)
CF11-05-02-02 LC	20	2 x 2 x 0.5	.33	(8.5)	30.3	(44.5)	40.8	(60)

Characteristic Impedance: 120 Ohms

Interbus Part No.	AWG	No. of Conductors and Rated Cross- Section in mm ²	Outer Diameter (approx)		Copper Index		Weight	
			in.	(mm)	lbs/mft	(kg/km)	lbs/mft	(kg/km)
CF11-02-03-02-IB-S	24	3 x 2 x 0.25	.33	(8.5)	28.6	(42)	56.4	(83)
CF11-02-03-02-10-03-IB-S	24	3 x 2 x 0.25						
	17	3 x 1	.39	(10)	50.3	(74)	91.8	(135)

Characteristic Impedance: 100 Ohms

Please refer to the Design Section for Electrical Characteristics

NOTE: The mentioned external diameters are maximum values.

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

TPE Bus Cables

Chainflex® CF11-LC-D

TPE Energy Chain® cable, shielded, PVC-free and halogen-free, oil-resistant, bio-oil-resistant



Price Index



CF11-LC-D



PREMIUM



Construction

Conductors: Finely stranded bare copper conductor with extreme flexibility.

Conductor insulation: Foamed polymer

Conductor colors: Color code DIN 47100

Intermediate jacket: TPE blend, adapted to the requirements of the Energy Chain®.

Shield: High flexural strength copper shield, coverage approx., 90% optical.

Outer jacket: TPE: particularly abrasion-resistant, high-flex blend, oil-resistant, coolant-resistant. Color: violet (RAL 4001).

Technical Data

Minimum bending radius, moving: 10 x outer cable diameter

Minimum bending radius, fixed: 5 x outer cable diameter

Permissible temperature, moving: -31°F to +158°F (-35°C to +70°C)

Permissible temperature, fixed: -40°F to +158°F (-40°C to +70°C)

UV resistance: Medium

Oil resistance: High

Voltage: 30V

Test voltage: 500V

Regulations: CE, DESINA, RoHS: 2002/95/EC; Please reference the Design Section (Chapter 1) for more information.

Typical Applications

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

Field Bus, (CAN-BUS) Part No.	AWG	No. of Conductors and Rated Cross- Section in mm²	Outer Diameter (approx) in. (mm)	Copper Index lbs/mft (kg/km)	Weight lbs/mft (kg/km)
**CF11-02-02-02-LC-D	24	2 x 2 x 0.25	.30 (7.5)	22.4 (33)	46.9 (69)
CF11-05-01-02-LC-D	20	1 x 2 x 0.5	.33 (8.5)	24.4 (36)	39.4 (58)

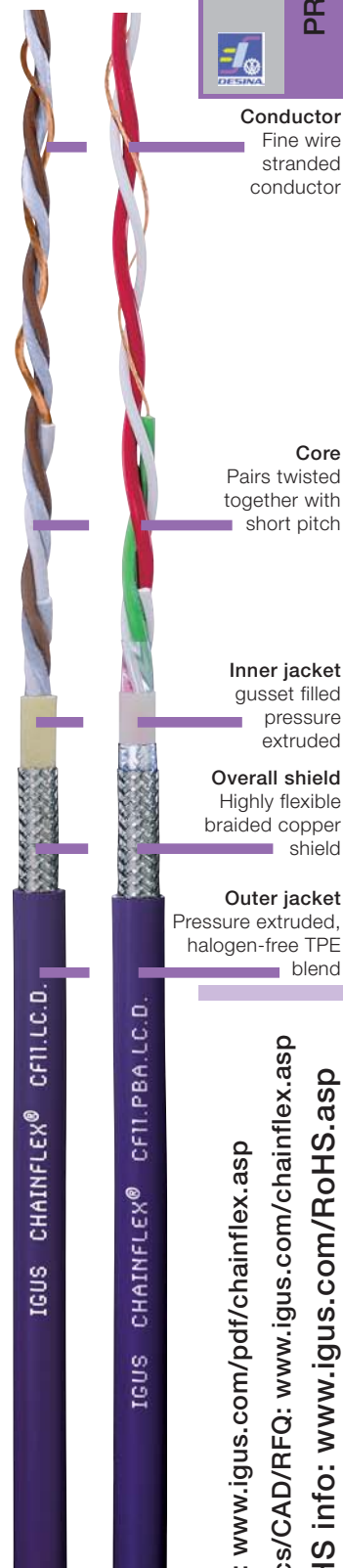
Characteristic Impedance: 120 Ohms

**Star Quad Design

Profibus Cable Part No.	AWG	No. of Conductors and Rated Cross- Section in mm²	Outer Diameter (approx) in. (mm)	Copper Index lbs/mft (kg/km)	Weight lbs/mft (kg/km)
CF11-02-01-02-PBA-LC-D	24	1 x 2 x 0.25	.33 (8.5)	22.4 (33)	46.9 (69)

Characteristic Impedance: 150 Ohms

NOTE: The mentioned external diameters are maximum values.



PDF: www.igus.com/pdf/chainflex.asp
Specs/CAD/RFQ: www.igus.com/chainflex.asp
RoHS info: www.igus.com/RoHS.asp

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

CF14US

PREMIUM



PUR Ethernet Cables



Price Index



Chainflex® CF14US

PUR Energy Chain® cable, shielded, oil-resistant,
UV-resistant, flame retardant, abrasion and tear resistant

Construction

Conductors: 26 AWG finely stranded tinned copper wires

Conductor insulation: Foam polyethylene

Conductor twisting: 4 pairs twisted together

Conductor colors: Blue & white/blue, orange & white/orange, green & white/green, brown & white/brown

Inner jacket: TPE

Shield: Tinned copper braid, 80% optical coverage

Outer jacket: Low adhesion PUR blend adapted to the requirements of the Energy Chain®

Color: Violet

Technical Data

Minimum bending radius, moving: 12.5 x outer cable diameter

Minimum bending radius, fixed: 7.5 x outer cable diameter

Permissible temperature, moving: -22°F to +176°F (-30°C to +80°C)

Permissible temperature, fixed: -40°F to +176°F (-40°C to +80°C)

UV resistance: Medium

Oil resistance: High

Voltage: 300V

Test voltage: 2500V

Insertion Loss: meets EIA/TIA 568-B.2 for CAT5e stranded conductors

Characteristic Impedance: 100Ω

Capacitance (Conductor to Conductor): 19pF/ft

Regulations: UL AWM: 80°C 300V, CSA AWM: I/II A/B 80°C 300V, **Flame resistance:** FT1, **CE:** In accordance with European Council Directive 73/23/EEC, **RoHS:** 2002/95/EC; Please reference the Design Section (Chapter 1) for more information.

Typical Applications

- for maximum mechanical load requirements
- indoor and outdoor applications without direct sunlight
- especially for freely suspended and gliding travel up to 328 ft (100m)
- storage and retrieval units for high-bay warehouses, machine tools, quick handling, cleanroom, semiconductor insertion, indoor cranes, low temperature applications

Fine wire
stranded
conductor

Core

Pairs twisted
together with
short pitch

Inner jacket
gusset filled,
pressure
extruded

Overall shield
Highly flexible
braided copper
shield

Outer jacket
Pressure extruded,
halogen-free PUR
blend

Internet: <http://www.igus.com>
email: sales@igus.com
QuickSpec: <http://www.igus.com/qs/chainflex.asp>

10.90

Part No.	AWG	Strand/ AWG	No. of Pairs x Cross Section (mm²)	Outer Diameter (approx)		Copper Index		Weight	
				in.	(mm)	lbs/mft	(kg/km)	lbs/mft	(kg/km)
CF14US-02-04-02	26	19/38	4 PR x .14	.30	(7.6)	7.4	(11)	60	(89)

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

TPE Ethernet Cables

Chainflex® CF14

TPE Energy Chain® cable, shielded, oil-resistant, bio-oil-resistant, PVC-free, halogen-free, UV-resistant



igus®

Price Index



CF14



PREMIUM



Construction

Conductors: Extremely high flexural strength bare copper wires. According to EN 60228

Conductor insulation: Foamed polymer

Conductor twisting: Two conductors, each layered in a short pitch, conductor pairs are then layered in short pitch around a polymer core.

Conductor colors: Color code DIN 47100

Intermediate jacket: TPE blend, adapted to the requirements of the Energy Chain®.

Shield: Tinned copper braid, 80% optical coverage

Outer jacket: TPE: particularly abrasion-resistant, high-flex blend, oil-resistant, coolant-resistant. Color: violet (RAL 4011).

Technical Data

Minimum bending radius, moving: 12.5 x outer cable diameter

Minimum bending radius, fixed: 7.5 x outer cable diameter

Permissible temperature, moving: -31°F to +158°F (-35°C to +70°C)

Permissible temperature, fixed: -40°F to +158°F (-40°C to +70°C)

UV resistance: Medium

Oil resistance: High

Voltage: 30V

Test voltage: 500V

Characteristic impedance: 100 Ω

Operating capacitance: approx. 12pF/ft

Transmission rates: up to 100 Mbit/s

Regulations: RoHS: 2002/95/EC; Please reference the Design Section (Chapter 1) for more information.

Typical Applications

- for maximum mechanical load requirements
- indoor and outdoor applications without direct sunlight
- especially for freely suspended and gliding travel up to 328 ft (100m)
- storage and retrieval units for high-bay warehouses, machine tools, quick handling, cleanroom, semiconductor insertion, indoor cranes, low temperature applications

Conductor
Fine wire
stranded
conductor

Core
2 conductors each
stranded with short
pitch

Inner jacket
gusset filled,
pressure
extruded

Overall shield
Highly flexible
braided copper
shield

Outer jacket
Pressure extruded,
halogen-free TPE
blend

Part No.	AWG	Strand AWG	No. of Conductors and Rated Cross- Section in mm²	Outer Diameter (approx)		Copper Index		Weight	
				in.	(mm)	lbs/mft	(kg/km)	lbs/mft	(kg/km)
**CF14-02-02-02-CAT5	24	19/36	2 x 2 x 0.25	.28	(7)	22	(33)	29	(43)
CF14-02-04-02-CAT5	24	19/36	4 x 2 x 0.25	.39	(10)	31	(46)	69	(101)

**Star Quad Design

NOTE: The mentioned external diameters are maximum values.

IGUS® CHAINFLEX® CF14.CAT5

PDF: www.igus.com/pdf/chainflex.asp
Specs/CAD/RFQ: www.igus.com/chainflex.asp
RoHS info: www.igus.com/RoHS.asp

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

Position Feedback Cables



Chainflex® CF211

PVC Energy Chain® cable, shielded, twisted pair,
oil-resistant, flame-retardant

Construction

Conductors: Finely stranded bare copper conductor with extreme flexibility.

Conductor insulation: Mechanically tough PVC

Conductor twisting: Two conductors, each twisted in a short pitch, conductor pairs are then twisted in short pitch around a polymer core.

Conductor colors: DIN 47100

Intermediate jacket: Polymer foil over outer conductor layer.

Shield: Tinned copper braid, coverage approx., 90% optical.

Outer jacket: PVC-based, low-adhesion blend, adapted to the requirements of the Energy Chain®, oil-resistant. Silicon-free in compliance with PV 3.10.7 - status 1992. **Color:** grey (RAL 7001)

Technical Data

Minimum bending radius, moving: 10 x outer cable diameter

Minimum bending radius, fixed: 5 x outer cable diameter

Permissible temperature, moving: +23°F to +158°F (-5°C to +70°C)

Permissible temperature, fixed: -4°F to +158°F (-20°C to +70°C)

Oil-resistance: Medium

Voltage: 30V

Test voltage: 500V

Regulations: cRUus AWM: UL AWM for USA & Canada style 2502 80°C 30V, **Flame Resistance:** FT1, CE, **RoHS:** 2002/95/EC; Please reference the Design Section (Chapter 1) for more information.

Typical Applications

- for medium mechanical load requirements
- preferably indoor applications, outdoor is acceptable for temperatures greater than +41°F (+5°C)
- especially for freely suspended travel and gliding travel up to 328 ft (100m)
- storage and retrieval units for high-bay warehouses, machining units/packages machines, handling, indoor cranes

Strain relief
Center core for high tensile strength

Conductor
Fine wire conductor

Core
Pairs twisted together with short pitch

Overall shield
Highly flexible braided copper shield

Outer jacket
Pressure extruded



Position Feedback Cables

Chainflex® CF211

PVC Energy Chain® cable, shielded, twisted pair,
oil-resistant, flame-retardant



Price Index



CF211



ECONOMY

Part No	AWG	No. of Pairs & Conductors and Rated Cross- Section in mm ²	Outer Diameter (approx) in. (mm)	Copper Index		Weight	
				lbs/mft	(kg/km)	lbs/mft	(kg/km)
CF211-001	26	3 STP x 0.14					
	26	4 C x 0.14					
	20	2 C x 0.50	.35 (9)	41.0	(61)	67.2	(100)
CF211-002	26	3 STP x 0.14					
	20	2 SC x 0.50	.35 (9)	42.3	(63)	73.9	(110)
CF211-006	26	3 STP x 0.14					
	26	4 C x 0.14					
	20	2 C x 0.50					
	22	4 C x 0.34	.37 (9.5)	49.0	(72)	80.6	(120)
CF211-009	24	4 PR x 0.25					
	20	2 C x 0.50	.35 (9)	34.7	(51)	75.5	(111)
CF211-010	24	4 PR x 0.25					
	17	2 C x 1.0	.37 (9.5)	50.3	(74)	95.9	(141)
CF211-011	22	4 PR x 0.34					
	20	4 C x 0.50	.35 (9)	51.0	(75)	91.8	(135)
CF211-014	24	4 STP x 0.25					
	20	4 C x 0.50	.51 (13)	57.1	(84)	143.5	(211)
CF211-016	24	3 STP x 0.25	.43 (11)	58.0	(85)	116	(170)
CF211-017	26	4 PR x 0.14					
	17	4 C x 1.0					
	26	(4 C x 0.14) SHLD	.35 (9)	57.0	(85)	83.3	(124)
CF211-018	24	2 PR x 0.25					
	20	2 C x 0.50	.28 (7)	27.6	(41)	41.7	(62)
CF211-019	24	3 C x 0.25					
	24	3 STP x 0.25					
	17	2C x 1.0	.35 (9)	55.2	(82)	77.3	(115)
CF211-027	26	5 PR x 0.14					
	20	2C x 0.50	.35 (9)	30.6	(45)	69.4	(102)

STP = Individually shielded Pair

PR = Twisted Pair

C = Single Conductor

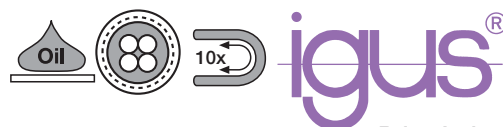
SC = Individually shielded conductor

SHLD = Shielded over Precable

PDF: www.igus.com/pdf/chainflex.asp
Specs/CAD/RFQ: www.igus.com/chainflex.asp
RoHS info: www.igus.com/RoHS.asp

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

Position Feedback Cables



Price Index



Chainflex® CF11-D

TPE Energy Chain® cable, shielded, twisted-pair, oil-resistant, bio-oil-resistant, PVC free, halogen-free

Construction

Conductors: Finely stranded bare copper conductor. According to EN 60228

Conductor insulation: TPE

Conductor twisting: Two conductors, each twisted in a short pitch, conductor pairs are twisted in short pitch around a polymer core.

Conductor colors: DIN 47100

Intermediate jacket: TPE blend, adapted to the requirements in the Energy Chain®.

Shield: High flexural strength 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:** green (RAL 6018).

Technical Data

Minimum bending radius, moving: 10 x outer cable diameter

Minimum bending radius, fixed: 5 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

Voltage: 30V

Test voltage: 500V

Regulations: CE, DESINA, RoHS: 2002/95/EC; Please reference the Design Section (Chapter 1) for more information.

Part No.	AWG	No. of Pairs & Conductors and Rated Cross- Section in mm²	Outer Diameter (approx)		Copper Index		Weight	
			in.	(mm)	lbs/mft	(kg/km)	lbs/mft	(kg/km)
CF11-001-D	26	3 STP x 0.14						
	26	4 C x 0.14						
	20	2 C x 0.50	.41	(10.5)	52.4	(78)	87.4	(130)
CF11-002-D	26	3 STP x 0.14						
	20	2 SC x 0.50	.41	(10.5)	44.4	(66)	80.6	(120)
CF11-003-D	26	3 PR x 0.14						
	17	2 C x 1.0	.31	(8)	34.0	(50)	61.2	(90)
CF11-004-D	26	4 PR x 0.14						
	26	4 C x 0.14						
	20	4 C x 0.50	.47	(12)	62.5	(93)	123.6	(184)
CF11-005-D	26	4 PR x 0.14						
	20	4 C x 0.50	.35	(9)	43	(64)	70.6	(105)
CF11-006-D	26	3 STP x 0.14						
	26	4 C x 0.14						
	24	4 C x 0.23						
	20	2 C x 0.50	.45	(11.5)	55.1	(81)	83.9	(125)
CF11-007-D	22	2 PR x 0.34	.30	(7.5)	20.8	(31)	47	(70)
CF11-008-D	24	3 PR x 0.25	.33	(8.5)	23.5	(35)	57	(85)
CF11-009-D	24	4 PR x 0.25						
	20	2 C x 0.50	.37	(9.5)	42.8	(63)	78.2	(115)
CF11-010-D	24	4 PR x 0.25						
	17	2 C x 1.0	.37	(9.5)	51.0	(75)	88.4	(130)
CF11-011-D	22	4 PR x 0.34						
	20	4 C x 0.50	.41	(10.5)	51.7	(77)	87.4	(130)

STP = Individually shielded Pair

PR = Twisted Pair

C = Single Conductor

SC = Individually shielded conductor

SHLD = Shielded over Precable

Conductor
Fine wire
stranded
conductor

Pair shield*
Highly flexible
braided copper
shield

Strain relief
Center core for
high tensile
stresses

Core
conductors stranded
with short pitch

Inner jacket
Gusset-filling,
pressure
extruded

Overall shield
Highly flexible braided
copper shield

Outer jacket
Pressure extruded,
halogen-free TPE
blend

IGUS CHAINFLEX® CF11-D

Internet: <http://www.igus.com>

email: sales@igus.com

QuickSpec: <http://www.igus.com/qs/chainflex.asp>

Position Feedback Cables

Chainflex® CF11-D

TPE Energy Chain® cable, shielded, twisted-pair, oil-resistant, bio-oil-resistant, PVC free, halogen-free

Typical Applications

- for maximum mechanical load requirements
- indoor and outdoor applications without direct sunlight
- especially for freely suspended and gliding travel up to 1312 ft (400m)
- storage and retrieval units for high-bay warehouses, machine tools, quick handling, cleanroom, semiconductor insertion, outdoor cranes, low temperature applications

CF11-D



PREMIUM



Part No.	AWG	No. of Pairs & Conductors and Rated Cross- Section in mm²	Outer Diameter (approx)		Copper Index		Weight	
			in.	(mm)	lbs/mft	(kg/km)	lbs/mft	(kg/km)
CF11-012-D	26	3 STP x 0.14						
	20	2 C x 0.50						
	26	6 C x 0.14						
	26	(3 C x 0.14) SHLD	.49	(12.5)	63.9	(94)	110.8	(163)
CF11-013-D	26	3 STP x 0.14						
	20	2 C x 0.50	.37	(9.5)	52.4	(78)	77.3	(115)
CF11-015-D	26	4 PR x 0.14						
	20	4 C x 0.50	.35	(9)	43.5	(64)	71.4	(105)
CF11-017-D	26	4 PR x 0.14						
	17	4 C x 1.0						
	26	(4 C x 0.14) SHLD	.35	(9)	57.1	(85)	107.5	(160)
CF11-018-D	24	2 PR x 0.25						
	20	2 C x 0.50	.28	(7)	27.6	(41)	38.3	(57)
CF11-019-D	24	3 C x 0.25						
	24	3 STP x 0.25						
	17	2 C x 1.0	.35	(9)	55.1	(82)	75.3	(112)
CF11-021-D	20	6 C x 0.5						
	24	5 PR x 0.25	.49	(12.5)	71.4	(105)	116.3	(171)
CF11-022-D	20	5 C x 0.5						
	24	2 C x 0.25	.33	(8.5)	40.8	(60)	61.2	(90)
CF11-025-D	26	3 STP x 0.14						
	20	2 C x 0.50	.49	(12.5)	81.6	(120)	115.6	(170)
CF11-027-D	26	5 PR x 0.14						
	20	2 C x 0.50	.37	(9.5)	40.1	(59)	76.8	(113)

NOTE: The mentioned external diameters are maximum values.

PDF: www.igus.com/pdf/chainflex.asp
 Specs/CAD/RFQ: www.igus.com/chainflex.asp
 RoHS info: www.igus.com/RoHS.asp

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

TPE Fiber Optic Cables



Chainflex® CFLG-6G

TPE Energy Chain® gradient glass fiber optic cable, UV-resistant, halogen-free, oil-resistant, metal-free, low temperature (40°C)

Construction

Fiber: 50/125 µm; 62.5/125 µm fibers in gel filled hollow cores

Core stranding: Strength rods with integrated torsion protection braid over gel-filled fiber sheath

Color code: 6 fiber — natural, yellow, green, red, violet, blue

12 fiber — above colors and light blue, gray, brown, black, orange, pink

Outer jacket: Low adhesion TPE abrasion resistant Color: Black

Technical Data

Minimum bending radius, moving: 12.5 outer cable diameter

Minimum bending radius, fixed: 7.5 x outer cable diameter

Permissible temperature, moving: -4°F to +140°F (-20°C to +60°C)

Permissible temperature, fixed: -13°F to +140°F (-25°C to +60°C)

Typical Applications

- for high mechanical load requirements
- maximum EMI protection
- indoor and outdoor applications
- for freely suspended and gliding travel up to 1641 ft (500m) and more
- outdoor ship-to-shore, crane applications, conveyor technology

Part No.	Fiber Count	Fiber Diameter	Outer Diameter µm (approx) in. (mm)	Weight (approx.) lbs/mft (kg/km)
CFLG-6G-62.5/125-TC	6	62.5/125	.45 (11.5)	160.0 (238)
CFLG-12G-62.5/125-TC	12	62.5/125	.45 (11.5)	160.0 (238)
CFLG-6G-50/125-TC	6	50/125	.45 (11.5)	160.0 (238)
CFLG-12G-50/125-TC	12	50/125	.45 (11.5)	160.0 (238)

Part No.	Bandwidth with 850 nm (Mhz x km)	Attenuation with 850 nm (dB/km)	Bandwidth with 1300 nm (Mhz x km)	Attenuation with 1300 nm (dB/km)
CFLG-6G-62.5/125-TC	160 - 200	3.2	200 - 500	0.9
CFLG-12G-62.5/125-TC	160 - 200	3.2	200 - 500	0.9
CFLG-6G-50/125-TC	200 - 600	2.5 - 3.5	600 - 1200	0.7 - 1.5
CFLG-12G-50/125-TC	200 - 600	2.5 - 3.5	600 - 1200	0.7 - 1.5

NOTE: The mentioned external diameters are maximum values.



Fiber Optic Cables



Price Index



CFLG-2HG



PREMIUM

Chainflex® CFLG-2HG

PUR Energy Chain® gradient glass fiber optic cable,
UV-resistant, halogen-free, oil-resistant, metal-free

Construction

Fiber: 50/125 µm; 62.5/125 µm fibers in gel filled hollow cores

Core stranding: Tubes with one fiber in each are twisted with strain relief elements

Color code: Black fiber jackets with white printed numbers

Outer jacket: Low adhesion PUR **Color:** Black

Technical Data

Minimum bending radius, moving: 12.5 outer cable diameter

Minimum bending radius, fixed: 7.5 x outer cable diameter

Permissible temperature, moving: -4°F to +140°F (-20°C to +60°C)

Permissible temperature, fixed: -13°F to +140°F (-25°C to +60°C)

Typical Applications

- for high mechanical load requirements
- maximum EMI protection
- indoor and outdoor applications
- for freely suspended and gliding travel up to 328 ft (100m) and more
- storage and retrieval units, machine tools, packaging machines, quick handling, cranes, refrigerating sector

Part No.	Fiber Count	Fiber Diameter	Outer Diameter µm (approx) in. (mm)	Weight (approx.) lbs/mft (kg/km)
CFLG-2HG-MF-50/125	2	50/125	.35 (9)	56 (85)
CFLG-2HG-MF-62.5/125	2	62.5/125	.35 (9)	56 (85)

NOTE: Other fiber counts available upon request

NOTE: The mentioned external diameters are maximum values.

Part No.	Bandwidth with 850 nm (Mhz x km)	Attenuation with 850 nm (dB/km)	Bandwidth with 1300 nm (Mhz x km)	Attenuation with 1300 nm (dB/km)
CFLG-2HG-MF-50/125	200 - 600	2.5 - 3.5	600 - 1200	0.7 - 1.5
CFLG-2HG-MF-62.5/125	160 - 200	3.2	200 - 500	0.9

FOC
Gradient
fibers

Fiber coating
Gel-filled
armored
hollow core

Core
Armored
hollow cores
with optimized
pitch length
stranded
around a strain
relief element

Outer jacket
Gusset-filled
pressure
extruded
PUR Blend

IGUS® CHAINFLEX® CFLG-2HG

PDF: www.igus.com/pdf/chainflex.asp
Specs/CAD/RFQ: www.igus.com/chainflex.asp
RoHS info: www.igus.com/RoHS.asp

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

CFLG

PREMIUM



TPE Fiber Optic Cables



igus®

Price Index



Chainflex® CFLG-G

TPE Energy Chain® step-index glass fiber optic cable,
with supply cores, halogen-free

Conductor

Highly flexible
copper conductor

FOC

Glass fiber yarn
twisting over
200-/230-µm
glass fibers

Core

Elements stranded
with short pitch

Outer jacket

Highly abrasion-
resistant, low-
adhesion PVC
blend

Description

In order to achieve the desired flexibility and harnessing ability, polymer fiber optics were used in the past. Today, it is possible to use glass fiber optic conductors, even for continuous-flex applications. The fiber optic cables used in igus® Chainflex® CFLG afford the advantage of combining the high optical transmission quality typical of glass with excellent ability to be harnessed

Construction

Conductors: Finely stranded bundled bare copper wires. Designed in accordance with VDE 0295, Class 5.

Conductor insulation: Mechanically robust PVC-insulating compound.

Conductor colors: Black with white numbers

Glass fiber optic cable: Glass-fiber optic cable with quartz fiber conductor. Fiber-optic cable diameter 200/230 µm with Aramide strain relief.

Outer jacket: PVC-based, low-adhesion blend, adapted to the requirements of the Energy Chain®. Color: blue (RAL 5011).

Technical Data

Minimum bending radius, moving: 10 x outer cable diameter, fixed:

Permissible temperature, moving: +23°F to +158°F (-5°C to +70°C)

Voltage: 300V

Attenuation: At 820 nm, 6 dB/km; with 1300 nm 30 dB/km.

Bandwidth: 20 MHz x km

Part No	AWG	No. of Conductors and Rated Cross- Section in mm²	Outer Diameter (approx)		Copper Index		Weight	
			in.	(mm)	lbs/mft	(kg/km)	lbs/mft	(kg/km)
CFLG-07-02-02	18	2 x 0.75, 2 x LWL	.35	(9)	9.8	(14.4)	47.6	(70)

NOTE: The mentioned external diameters are maximum values.

Internet: <http://www.igus.com>
email: sales@igus.com
QuickSpec: <http://www.igus.com/qs/chainflex.asp>

10.98

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

PUR Polymer Optic



igus®

Price Index



CFLK



PREMIUM

Chainflex® CFLK

PUR Energy Chain® polymer optic cable, oil-resistant

Construction

Polymer fiber: Fiber diameter: 980/1000 µm; Numerical aperture, NA = 0.47

Core: PE insulation with stranded reinforcement

Color: Black

Outer jacket: PUR-based blend, adapted to the requirements of the Energy Chain®. Color: violet

Technical Data

Minimum bending radius, moving: 12.5 outer cable diameter

Minimum bending radius, fixed: 7.5 x outer cable diameter

Permissible temperature, moving: -4°F to +158°F (-20°C to +70°C)

Permissible temperature, fixed: -13°F to +140°F (-25°C to +60°C)

UV resistance: Medium

Oil resistance: High

Typical Applications

- for high mechanical load requirements
- maximum EMI protection
- preferably indoor applications
- for freely suspended and gliding travel up to 49 ft (15m) and more
- wood/stone processing, packaging industry, supply system, handling, adjusting equipment

Part No.	Numbers of Fibers KWL	Fiber Diameter µm (approx)	Outer Diameter (approx.)		Weight	
			in.	(mm)	lbs/mft	(kg/km)
CFLK-L1-01	1	980/1000	.20	(5)	17.0	(25)

Part No.	Bandwidth with 650 nm (Mhz x km)	Attenuation with 650 nm (dB/km)
CFLG-2HG-MF-50/125	40	200



PDF: www.igus.com/pdf/chainflex.asp
Specs/CAD/RFQ: www.igus.com/chainflex.asp
RoHS info: www.igus.com/RoHS.asp

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

10.99

TPE Video Coax Cables



Chainflex® CFKoax1

TPE Energy Chain® cable, 75 □ Koax cable, oil-resistant, bio-oil-resistant, UV-resistant

Conductor

Specially bend-resistant fine wire stranded conductor

Conductor shield

Highly flexible braided copper shield

Core

Coaxes twisted with short pitch

Outer jacket

gusset filled, pressure extruded, halogen-free TPE blend

Construction

Conductors: Tinned copper wires with short pitch

Conductor insulation: FEP

Coax shield: Tinned copper braid, coverage 90% optical

Coax jacket/color: TPE, red, green, blue, white, black

Cable core for 5 coax cable: coax 5 combined with short pitch

Outer jacket: TPE abrasion-resistant, high-flex blend, oil-resistant, coolant-resistant. **Color:** dark blue (RAL 5011).

Technical Data

Minimum bending radius, moving: 10 outer cable diameter

Minimum bending radius, fixed: 7.5 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

Nominal voltage: 300V

Test voltage: 1500V

Operating capacitance: approx. 19.5pF/ft

Characteristic impedance: 75 □

Typical Applications

- for maximum mechanical load requirements
- indoor and outdoor applications, UV resistant
- for freely suspended and gliding travel up to 1312 ft (400m)
- storage and retrieval units for high bay warehouses, machine tools, quick handling, cleanroom, semiconductor insertion, outdoor cranes, low temperature applications

Part No.	AWG	Strand/ AWG	No. of Coax and color code
CF Koax 1-01	30	7/38	1 black
CF Koax 1-05	30	7/38	5 red, green, blue, white, black

Part No.	Outer Diameter (approx)		Copper Index		Weight	
	in.	(mm)	lbs/mft	(kg/km)	lbs/mft	(kg/km)
CF Koax 1-01	.18	(4.5)	6.1	(9)	17.0	(25)
CF Koax 1-05	.39	(10)	32.0	(47)	91.8	(135)

NOTE: The mentioned external diameters are maximum values.