

# TPE Ethernet Cables

## Chainflex® CF14

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

igus®

CF14

Price Index



CLASS  
6.3.4

### Construction

**Conductors:** Finely stranded bare copper conductors with extreme flexibility

**Conductor insulation:** Foamed polymer

**Conductor twisting:** Twisted pairs are cabled together with a short pitch

**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 Ohms

**Operating capacitance:** approx. 12pF/ft

**Transmission rates:** up to 100 Mbit/s

**Regulations: 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 CF9-15-07

### Typical Applications

- for maximum mechanical load requirements
- indoor and outdoor applications without direct sunlight
- especially for unsupported 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

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)
CF14-02-05-02-CAT5	24	19/36	5 x 2 x 0.25	.41	(10.5)	36	(53)	71	(106)

\*\*Star Quad Design

**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



12.5x



Clean-  
Room

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