



# TPE Robot Cable

## Chainflex® CF ROBOT

**TPE Energy Chain® cable, torsion flexing, shielded, oil-resistant, bio-oil-resistant, PVC-free, UV-resistant, flame retardant**

### Conductor

Highly flexible special conductor

### Insulation

Pressure extruded TPE

High quality rayon yarn

### PTFE

barrier

### Shield

Torsion resistant copper shield

High rigidity rayon yarn

### Outer jacket

Pressure extruded, TPE blend

## Construction

**Conductors:** Finely stranded bare copper wires

**Conductor insulation:** Mechanically high quality TPE blend

**Total shielding:** Torsion flex tinned copper serves, coverage 90% optical

**Outer jacket:** Low adhesion, abrasion resistant and highly bend resistant TPE base suited for the requirements of Energy Chain® systems

Silicon-free in compliance with PV 3.10.7 - status 1992. **Color:** black.

## Technical Data

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

**Minimum bending radius, fixed:** 4 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)

**Voltage:** 1000V

**Testing voltage:** 4000V

**Torsion:** +/- 180°, with 1m cable length

**Oil resistance:** High

**UV resistance:** High

**Regulations: cRUus:** UL AWM style for USA & Canada: 21387 90°C 1000V

**Flame Resistance:** According to IEC 60332-1-2, CEI 20-34, FT1, VW-1

**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 robot and 3D motion
- robots, handling, spindle drives

| 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) |
| CFROBOT-035 | 8   | 1 x 10.0                                         | .41                     | (10.5) | 82.3         | (121)   | 134     | (197)   |
| CFROBOT-036 | 6   | 1 x 16.0                                         | .47                     | (12.0) | 125.0        | (183)   | 186     | (274)   |
| CFROBOT-037 | 4   | 1 x 25.0                                         | .57                     | (14.5) | 197.0        | (289)   | 289     | (425)   |
| CFROBOT-038 | 2   | 1 x 35.0                                         | .61                     | (15.5) | 266.0        | (391)   | 363     | (534)   |
| CFROBOT-039 | 1   | 1 x 50.0                                         | .71                     | (18.0) | 371.0        | (546)   | 494     | (726)   |

