

Control cable | PVC | chainflex® CF160.UL

36 10 million Double strokes guaranteed

7.5 x d Bend radius, e-chain®

50m Travel distance

- For medium duty applications
- PVC outer jacket
- Shielded
- Oil-resistant
- Flame-retardant
- TC-ER (Power and Control Tray Cable)

UL TC-ER UL 1277 MTW UL 1063 WTTTC UL 2277 DP-1 UL 1690 AWM 2587	CSA: C(UL) CIG/TC Specifications: OIL RES I / SUN RES 75°C wet ≥ 2.5mm² 90°C dry DIR BUR ≥2.5mm²
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Dynamic information

 Bend radius	e-chain® linear flexible	minimum 7.5 x d
	fixed	minimum 6 x d
 Temperature	e-chain® linear flexible	+5°C up to +70°C
	fixed	-5°C up to +70°C (following DIN EN 60811-504)
 v max.	unsupported	3m/s
 a max.	gliding	2m/s
 Travel distance	Unsupported travels and up to 50m for gliding applications, Class 4	

Cable structure

 Conductor	Finely stranded conductor consisting of bare copper wires (following DIN EN 60228).
 Core insulation	Mechanically high-quality PVC/PA mixture.
 Core structure	Number of cores < 12: Cores wound in a layer with short pitch length. Number of cores ≥ 12: Cores wound in bundles which are then wound around a high tensile strength centre element, all with optimised short pitch lengths and directions. Especially low-torsion structure.
 Core identification	Black cores with white numbers, one green-yellow core.
 Inner jacket	PVC mixture adapted to suit the requirements in e-chains®.
 Overall shield	Bending-resistant braiding made of tinned copper wires. Coverage linear approx. 55%, optical approx. 80%
 Outer jacket	Low-adhesion, oil-resistant PVC mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-4-1) Colour: jet black (similar to RAL 9005)
 CFRIP®	Strip cables faster: a tear strip is moulded into the inner jacket Video ► www.igus.eu/CFRIP

Electrical information

 Nominal voltage	300/500V (following DIN VDE 0298-3) 600V TC-ER, 1000V WTTTC, 600V MTW, 600V AWM
 Testing voltage	2,000V (following DIN EN 50395)

EPLAN download, configurators ► www.igus.eu/CF160UL

36-month guarantee ... more than 1,350 cable types from stock ... no cutting charges



EU2023

Class 4.4.2.1

Properties and approvals

 UV resistance	Medium
 Oil resistance	Oil resistant (according to DIN EN 50363-4-1), UL Oil Res I, Class 2
 Flame-retardant	According to IEC 60332-1-2, Cable Flame, VW-1, FT1, FT2 / Horizontal Flame, FT4
 Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
 UL verified	Certificate No. B129699: „igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year“
 UL listed	TC-ER UL 1277, WTTTC UL 2277, MTW UL W63
 UL/CSA AWM	See data sheet for details ► www.igus.eu/CF160UL
 NEC	In accordance with Article 501 Part II 501.10(B) Class I Division 2 and Article 502 Part II 502.10(B), TC-ER cables may be used in Class I and Class II, Division 2 hazardous areas. Following NFPA 79-2018, chapter 12.9
 NFPA	
 REACH	In accordance with regulation (EC) No. 1907/2006 (REACH)
 Lead-free	Following 2011/65/EC (RoHS-II)
 CE	Following 2014/35/EU
 UKCA	In accordance with the valid regulations of the United Kingdom (as at 08/2021)

Guaranteed service life (details see page 28-29)

Double strokes*	5 million		7.5 million		10 million	
	< 10m	≥ 10m	< 10m	≥ 10m	< 10m	≥ 10m
Temperature, from/to [°C]	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]	R min. [factor x d]
+5/+15	10	12.5	11	13.5	12	14.5
+15/+60	7.5	10	8.5	11	9.5	12
+60/+70	10	12.5	11	13.5	12	14.5

* Higher number of double strokes? Service life calculation online ► www.igus.eu/chainflexlife

Typical application areas

- For medium duty applications, Class 4
- Unsupported travels and up to 50m for gliding applications, Class 4
- Light oil influence, Class 2
- Preferably indoor applications, but also outdoor ones at temperatures > 5 °C
- Storage and retrieval units for high-bay warehouses, machining units/packaging machines, quick handling, indoor cranes, laying of cables on cable trays



UL-verified chainflex® guarantee ... www.igus.eu/ul-verified

79



Basic requirements
Travel distance
Oil resistance
Torsion

low	1	2	3	4	5	6	7	highest
unsupported	1	2	3	4	5	6	≥ 400m	
none	1	2	3	4	highest			
none	1	2	3	4	±360°			

Example image

igus® chainflex® CF160.UL

Control cable | PVC | chainflex® CF160.UL

Strip cables 50% faster with CFRIP® tear strip

Class 4.4.2.1

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igus® chainflex® CF160.UL

Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
CF160.UL.10.03	(3G1.0)C	9.5	53	121
CF160.UL.10.04	(4G1.0)C	10.0	66	143
CF160.UL.10.05	(5G1.0)C	11.0	77	164
CF160.UL.10.07	(7G1.0)C	12.5	107	220
CF160.UL.10.12	(12G1.0)C	18.5	177	389
CF160.UL.10.18	(18G1.0)C	23.5	280	648
CF160.UL.15.03	(3G1.5)C	10.0	72	149
CF160.UL.15.04	(4G1.5)C	11.0	89	175
CF160.UL.15.05	(5G1.5)C	12.0	105	204
CF160.UL.15.07 ¹⁷⁾	(7G1.5)C	13.5	140	271
CF160.UL.15.12	(12G1.5)C	20.0	243	478
CF160.UL.15.18	(18G1.5)C	25.5	373	762
CF160.UL.25.03	(3G2.5)C	11.0	103	185
CF160.UL.25.04	(4G2.5)C	12.0	129	219
CF160.UL.25.05	(5G2.5)C	13.0	159	264
CF160.UL.25.07 ¹⁷⁾	(7G2.5)C	14.5	223	361
CF160.UL.25.12	(12G2.5)C	23.5	389	688
CF160.UL.25.18	(18G2.5)C	29.5	573	1092

¹⁷⁾ When using the cables with "7G1.5mm²" and "7G2.5mm²" minimum bend radius must be 17.5xd with gliding travel distance ≥ 5m.

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core x = without earth core

Order example: **CF160.UL.10.03** - to your desired length (0.5m steps)
CF160.UL chainflex® series .10 Code nominal cross section .03 Number of cores

Order online ► www.igus.eu/CF160UL

Delivery time 24hrs or today.
Delivery time means time until goods are shipped.

The only MTW/TC-ER cable for e-chain® AND cable tray

UL
TC-ER UL 1277
MTW UL 1063
WTTC UL 2277
DP-1 UL 1690
AWM 2587

CSA:
C(UL) CIC/TC

Specifications:
OIL RES I / SUN RES
75°C wet ≥2.5mm²
90°C dry
DIR BUR ≥2.5 mm²

* with guaranteed service life for use in e-chains® according to the guarantee conditions



igus 36-month
chainflex cable
guarantee and
service life
calculator based
on 2 billion test
cycles per year

Guarantee
igus chainflex
36
up to 36 months guarantee