

Basic requirements	low	1	2	3	4	5	6	7	highest
Travel distance	unsupported	1	2	3	4	5	6	7	≥ 400 m
Oil resistance	none	1	2	3	4	5	6	7	highest
Torsion	none	1	2	3	4	5	6	7	±180°

Thermocouple cable | PUR | chainflex® CF THERMO

- For heavy duty applications
- PUR outer jacket
- Oil and coolant-resistant
- PVC and halogen-free
- Notch-resistant
- Hydrolysis and microbe-resistant

Dynamic information

	Bend radius	e-chain® linear	minimum 12.5 x d
		flexible	minimum 10 x d
		fixed	minimum 5 x d
	Temperature	e-chain® linear	-25 °C to +80 °C
		flexible	-40 °C to +80 °C (following DIN EN 60811-504)
		fixed	-50 °C to +80 °C (following DIN EN 50305)
	v max.	unsupported	2 m/s
		gliding	1 m/s
	a max.		20 m/s ²
	Travel distance	Unsupported travel distances and up to 50 m for gliding applications, Class 4	

Cable structure

	Conductor	Conductor consisting of a flexible special alloy. ► Product range table
	Core insulation	Mechanically high-quality TPE mixture.
	Core structure	The individual cores are wound in layers with short pitch lengths.
	Core identification	According to thermo specification. ► Product range table
	Intermediate layer	Fleece taping over the outer layer.
	Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage approx. 70 % inear, approx. 90 % optical
	Outer jacket	Low-adhesion, highly abrasion-resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2). Colour: According to thermo specification ► Product range table

Electrical information

	Nominal voltage	300/300 V (following DIN VDE 0298-3)
	Testing voltage	1500 V

Class 5.4.3.1

Properties and approvals

	UV resistance	Medium.
	Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3.
	Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992).
	Halogen-free	Following DIN EN 60754.
	EAC	Certificate no. RU C-DE.ME77.B.01254 (TR SU)
	CTP	Certificate no. C-DE.PB49.B.00416 (Fire safety)
	Lead-free	Following 2011/65/EU (RoHS-II).
	Cleanroom	According to ISO Class 1. Outer jacket material complies with CF27.07.05.02.01.D, tested by IPA according to standard 14644-1.
	CE	Following 2014/35/EU.

Typical mechanical application areas

- For heavy duty applications
- Almost unlimited resistance to oil
- Indoor and outdoor applications with average sun radiation
- Unsupported travel distances and up to 50 m for gliding applications
- Machining units/machine tools, Storage and retrieval units for high-bay warehouses, Packaging industry, quick handling equipment, refrigerating sector

Part No.	Number of cores and conductor nominal cross section	Outer diameter (d) max.	Copper index	Weight
CFTHERMO.J.001 ¹⁾	(2x0.23)C	5.5	9	36
CFTHERMO.K.001	(2x0.23)C	5.5	9	36
CFTHERMO.K.002	(2x0.23)C+3G0.5	7.5	26	67
CFTHERMO.T.002 ¹¹⁾	(2x0.23)C+3G0.5	7.5	26	66

¹⁾ The cross-section of the copper conductor is equivalent to the electrically effective cross-section.

¹¹⁾ Phase-out model

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

Part No.	Thermo materials	Core group	Colour code
CFTHERMO.J.001 ¹⁾	Fe-CuNi	(2x0.23)C	+ black, - white
CFTHERMO.K.001	NiCr-Ni	(2x0.23)C	+ green, - white
CFTHERMO.K.002	NiCr-Ni	(2x0.23)C	+ green, - white
	Cu	3G0.5	brown, blue, yellow-green
CFTHERMO.T.002 ¹¹⁾	Cu-CuNi	(2x0.23)C	+ brown, - white
	Cu	3G0.5	brown, blue, yellow-green

¹⁾ The cross-section of the copper conductor is equivalent to the electrically effective cross-section.

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Example image