Thermocouple cable | PUR | chainflex® CFTHERMO

Example image

- For high mechanical load requirements
- PUR outer jacket
- Oil-resistant and coolant-resistant
- PVC and halogen-free
- Notch-resistant
- Hydrolysis and microbe-resistant

Dynamic Information

Bend radius	**E-Chain® linear**	min. 12.5 x d
	flexible	min. 10 x d
	fixed	min. 5 x d
Temperature	**E-Chain® linear**	-13 °F to +176 °F (-25 °C to +80 °C)
	flexible	-40 °F to +176 °F (-40 °C to +80 °C)
	fixed	-58 °F to +176 °F (-50 °C to +80 °C)
v max.	**unsupported**	6.56 ft/s (2 m/s)
	gliding	3.28 ft/s (1 m/s)
a max.	65.6 ft/s² (20 m/s²)	
Travel distance	Unsupported travel distances and for gliding applications up to 164.1 ft (50 m), Class 4	

Cable structure

Conductor	Conductor consisting of a flexible special alloy. ▶ See P/N Table
Conductor insulation	Mechanically high-quality TPE mixture.
Conductor construction	Conductors are cabled in layers with short pitch lengths.
Color code	According to thermo specification. ▶ See P/N Table
Intermediate layer	Fleece taping over the external layer.
Overall shield	Extremely bending-resistant tinned copper braid. 90 % optical coverage
Outer jacket	Low-adhesion, halogen-free, highly abrasion-resistant mixture on the basis of PUR, adapted to suit the requirements in E-Chains® (following DIN EN 50363-10-2). Color: According to thermo specification ▶ See P/N Table

Electrical Information

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

Configurators ▶ www.igus.com/CFTHERMO

36 month guarantee ... 1,354 types from stock ... no cutting charges

Class 5.4.3.1

Basic requirements	low	1	2	3	4	**5**	6	7	highest
Travel distance	unsupported	1	2	3	**4**	5	6	≥ 1312 ft	
Oil resistance	none	1	2	**3**	4	highest			
Torsion	none	**1**	2	3	4	±360°			

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
UL verified	Certificate No. B129699: igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year
EAC	Certificate No. RU C-DE.ME77.B.00300/19 (TR ZU)
REACH	In accordance with regulation (EC) No. 1907/2006 (REACH)
Lead-free	Following 2011/65/EC (RoHS-II/RoHS-III)
Cleanroom	According to ISO Class 1. The outer jacket material of this series complies with CF77.UL.05.12.D - tested by IPA according to standard DIN EN ISO 14644-1
CE	Following 2014/35/EU

Typical application areas

- For high mechanical load requirements, Class 5
- Unsupported travel distances and for gliding applications up to 164 ft (50 m), Class 4
- Almost unlimited resistance to oil, Class 3
- Indoor and outdoor applications with average sun radiation
- Machining units/machine tools, Storage and retrieval units for high-bay warehouses, Packaging industry, quick handling, refrigerating sector

Part No.	AWG	Number of Conductors and rated cross section	Outer diameter max.		Copper index		Weight	
		[mm²]	[in.]	[mm]	[lbs/mft]	[kg/km]	[lbs/mft]	[kg/km]
CFTHERMO-J-001 *	24	1 PR x 0.23	0.22	5.5	6.0	9	24.2	36
CFTHERMO-K-001	24	1 PR x 0.23	0.22	5.5	6.0	9	24.9	37
CFTHERMO-K-002	24	1 STP x 0.23	0.30	7.5	16.1	24	45.0	67
	20	3 x 0.5						

* The cross-section of the copper conductor is equivalent to the electrically effective cross-section.
Note: The given outer diameters are maximum values.
G = with green-yellow earth core **x =** without earth core

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

CFTHERMO PUR 12.5 x d