Klöpper-Therm Heating Cables

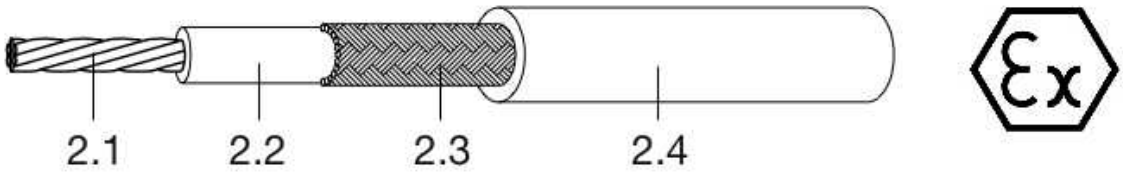
Polymer-Insulated Heating Cable Type TCTEX-H-*

1. Product Description

The fluoropolymer-insulated heating cable TCTEX-H-***** has been certified by the EC-type examination certificate no. KEMA 10ATEX0013 U for use in hazardous areas and, in combination with the connection components certified for this purpose, it fulfils all requirements according to EN 60079-30-1 as electrical apparatus for electrical heating systems.

Ex-marking: II 2G Ex e II
II 2D Ex tD A21

2. Structure of fluoropolymer-insulated heating cable



2.1	Resistance conductor:	see table on page 2
2.2	Conductor insulation:	PFA, wall thickn.: 0,90 mm ([1] 1,00 mm)
2.3	Metal braid:	Cu-Ni-plated,16x5x0,15, cross section 1,41 mm²
	min. 70% cover	[2] Cu-Ni-plated,16x5x0,20, cross section 2,51 mm²
		[3] Cu-Ni-plated,16x6x0,20, cross section 3,01 mm²
2.4	Outer sheath:	PFA, wall thickn.: 0,60 mm ([4] 0,70 mm) ([5] 0,80 mm)

3. General Characteristics

Resistance at +20°C:	see listing under **4.** on page 2
Operating temperature:	- 60°C / + 260°C
Power output:	30 W/m max. (actual value according to the application)
Test voltage (U_{eff}):	2,50 kV (core/braid)
Nominal voltage (U_0/U):	450 V / 750 V
Mechanical stability:	7 Joule, design according to EN 60079-30-1
Bending radius minimum:	1,08 Ohm/km to 1,71 Ohm/km 25mm
	2,9 Ohm/km to 8000 Ohm/km 15mm
Min. assembly temperature:	- 60°C

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4. Type Overview and Technical Data

Product Name Structure see under **2.** on page 1 TCTEX-H-*	Resistance at +20°C * Ohm/km	Alloy of Conductor	Structure of Conductor Number times Diameter	Dia-meter Heating Conductor mm	Cross Section Heating Conductor mm²	Outer Diameter Heating Cable mm	Temperature Coefficient of electrical Resistance 10^{-6}/K
TCTEX-H-1.08 [1) 3) 5)]	1,08	Cu-Ni-pltd.	126x0,404	5,800	16,00	10,20 +0,2	+4300
TCTEX-H-1.71 [3) 4)]	1,71	Cu-Ni-pltd.	80x0,404	4,600	10,00	8,60 +0,2	+4300
TCTEX-H-2.9 [2) 4)]	2,9	Cu-Ni-pltd.	84x0,300	3,600	6,00	7,60 +0,2	+4300
TCTEX-H-4 [2)]	4,0	Cu-Ni-pltd.	63x0,300	2,750	4,45	6,55 +0,2	+4300
TCTEX-H-4.4 [2)]	4,4	Cu-Ni-pltd.	56x0,300	2,900	4,00	6,70 +0,2	+4300
TCTEX-H-7.2	7,2	Cu-Ni-pltd.	50x0,250	1,940	2,50	5,54 +0,2	+4300
TCTEX-H-10	10	Cu-Ni-pltd.	56x0,203	1,750	1,81	5,35 +0,2	+4300
TCTEX-H-11.7	11,7	Cu-Ni-pltd.	30x0,250	1,600	1,47	5,20 +0,2	+4300
TCTEX-H-15	15	Cu-Ni-pltd.	37x0,200	1,420	1,16	5,02 +0,2	+4300
TCTEX-H-17.8	17,8	Cu-Ni-pltd.	32x0,200	1,300	1,00	4,90 +0,2	+4300
TCTEX-H-25	25	CuNi 1	7x0,423	1,269	0,98	4,87 +0,2	+3000
TCTEX-H-31.5	31,5	CuNi 2	7x0,530	1,590	1,54	5,19 +0,2	+1000 to+1600
TCTEX-H-50	50	CuNi 2	7x0,423	1,269	0,98	4,87 +0,2	+1000 to+1600
TCTEX-H-50	50	CuNi 2	15x0,289	1,33	0,98	4,93 +0,2	+1000 to+1600
TCTEX-H-65	65	CuNi 2	7x0,370	1,110	0,75	4,71 +0,2	+1000 to+1600
TCTEX-H-80	80	CuNi 2	7x0,335	1,010	0,62	4,61 +0,2	+1000 to+1600
TCTEX-H-100	100	CuNi 10	7x0,520	1,560	1,48	5,16 +0,2	+350 to+450
TCTEX-H-100	100	CuNi 2	7x0,3	0,90	0,49	4,50 +0,2	+1000 to+1600
TCTEX-H-150	150	CuNi 10	7x0,423	1,269	0,98	4,87 +0,2	+350 to+450
TCTEX-H-180	180	CuNi 6	7x0,32	0,96	0,56	4,56 +0,2	+500 to+900
TCTEX-H-200	200	CuNi 10	7x0,366	1,098	0,73	4,70 +0,2	+350 to+450
TCTEX-H-320	320	CuNi23Mn	7x0,410	1,230	0,92	4,83 +0,2	+180
TCTEX-H-360	360	CuNi 10	7x0,273	0,819	0,41	4,42 +0,2	+350 to+450
TCTEX-H-380	380	CuNi23Mn	7x0,376	1,128	0,77	4,73 +0,2	+180
TCTEX-H-480	480	CuNi23Mn	7x0,335	1,010	0,62	4,61 +0,2	+180
TCTEX-H-600	600	CuNi23Mn	7x0,300	0,900	0,49	4,50 +0,2	+180
TCTEX-H-650	650	CuNi23Mn	7x0,288	0,864	0,46	4,46 +0,2	+180
TCTEX-H-700	700	CuNi23Mn	7x0,277	0,831	0,42	4,43 +0,2	+180
TCTEX-H-810	810	CuNi 44	7x0,329	0,987	0,59	4,59 +0,2	-80 to+40
TCTEX-H-1000	1000	CuNi 44	7x0,296	0,888	0,48	4,49 +0,2	-80 to+40
TCTEX-H-1440	1440	CuNi 44	7x0,246	0,738	0,33	4,34 +0,2	-80 to+40
TCTEX-H-1750	1750	CuNi 44	9x0,200	0,700	0,28	4,40 +0,2	-80 to+40
TCTEX-H-1750	1750	CuNi 44	7x0,224	0,672	0,28	4,27 +0,2	-80 to+40
TCTEX-H-2000	2000	NiCr30/20	7x0,305	0,915	0,51	4,52 +0,2	+300 to+400
TCTEX-H-3000	3000	NiCr30/20	7x0,249	0,747	0,34	4,35 +0,2	+300 to+400
TCTEX-H-8000	8000	NiCr80/20	7x0,155	0,465	0,13	4,07 +0,2	+50 to+150

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