

At a Glance

Applications



Temperature maintenance



Silos, vessels, tanks



Pipelines

- › Chemistry and Petrochemistry
- › Oil and Gas Industry
- › Industrial processes
- › Mobile processing facilities
- › Vacuum processes

Benefits

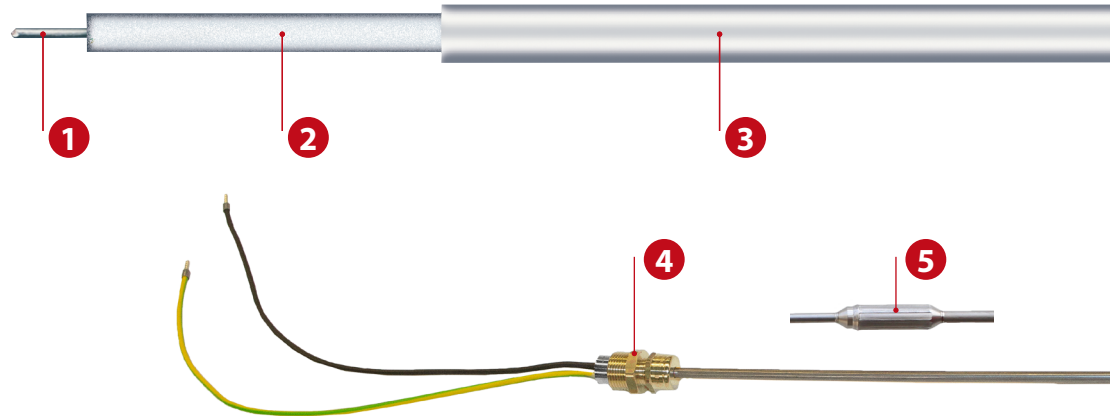
- › 100% homogeneous design
- › No filling holes
- › High temperature resistance
- › Maximum resistance to chemicals
- › High power output
- › Protection against stress corrosion
- › Resistant against moisture

Approvals



- › Classification
- II 2 G Ex 60079-30-1 db eb IIC Gb
- II 2 D Ex 60079-30-1 tb IIIC Db
- › Certification
- FM15ATEX0046X
- FM18US0191X
- FM18CA0089X
- IECEx FME 15.0009X

ELK-MI VA up to 700 °C, single conductor



1 Heating conductor (SINGLE)	Nichrome R, KP, Constantan, Alloy 60 or Copper
2 Insulation	Magnesium oxide (MgO) acc. ASTM E1652-Standard
3 Outer jacket	Stainless steel 1.4541 (AISI 321)
4 Cable gland	Brass or Stainless steel M20 x 1.5 / M25 x 1.5
5 Connection	Laser welded, pressed

Manufactured and assembled exclusively from premium nickel/chrome Alloy 825 or stainless steel 1.4541. eltherm's revolutionary Clean Laser Seal technology (CLS) guarantees high output and reliability in all industrial applications. This technology offers the technologically best possible protection against stress corrosion, especially with aggressive chemicals such as leachable chlorides or high sulphur content. MI trace heating consists of one- or two-wire heating cables and mineral-insulated cold conductor connections with Clean Laser Seal connection. The free end of the cold conductor is sealed seamlessly and connected with a flexible supply line.

Checklist

Junction boxes

ELAK-6-SP	220 x 120 x 90 mm, ALU, up to 3 heating cables, 6x M20, 1x M25	MDA0002
ELAK-3-SP	122 x 120 x 90 mm, ALU, up to 1 heating cable, 1x M25, 2x M20	MDA0003
ELAK-5-SP	122 x 120 x 90 mm, ALU, up to 2 heating cables, 1x M25, 4x M20	MDA0005

Temperature-resistant power connection line

Power connection line VA, SINGLE , 500 V, 2.5 mm ² , Ø 5.3 mm	20330K0025
Power connection line VA, SINGLE , 500 V, 6.0 mm ² , Ø 6.4 mm	20330K0060

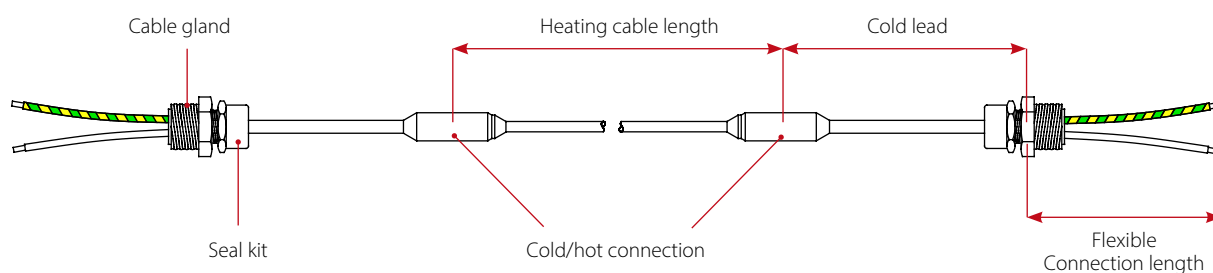
Factory assembly

ELVB-MI-VA-S-2.5mm ²	Laser welded, SINGLE 2.5 mm ²	MAG0000
ELVB-MI-VA-S-6.0mm ²	Laser welded, SINGLE 6.0 mm ²	MAG0001
ELVB-MI-VA-S-2.5mm ² -Ex	Laser welded, SINGLE 2.5 mm ²	MAG0002



Technical Information

Rated temperature	up to 700 °C (565 °C in hazardous areas accord. Ex certificate)
Ambient temperature	-60 °C up to +60 °C
Nominal output	up to 250 W/m *
Nominal voltage	up to 500 V AC
Min. Bending radius	Diameter x 6
Min. Installation temperature	- 60 °C
Protective conductor connection	Protective connection integrated
Protection rating / protection class	IP65 / Protection class I
Power connection line	2 x 0.50 m



NOTE

- * The output per meter of heating cable and the maximum possible operating temperatures depend on the respective application. For individual cases, we recommend that you contact our engineers – we will be pleased to advise you.
- An excerpt from the possible resistances is listed here. Additional cold conductor diameters are also available. Please feel free to contact us!
- Cables shall neither intersect nor contact.
- Provide protection by means of circuit breaker FI 30. mA
- Please observe the standards IEC 62395-2, EN 60519-10.



Heating cable data

Nominal resistance	Outer Ø	Bending radius	Conductor material	Temperature coefficient α	Max. conductor temperature	Art.-No.
[Ω /km @ 20°C]	[mm]	[mm]		[$\times 10^{-5}$ / K]	[°C]	
10000	3.2	19	NiCr8020	1,006	700	2033001000
6300	3.2	19	NiCr8020	1,006	700	2033000630
5200	3.5	21	NiCr8020	1,006	700	2033000520
4000	3.2	19	NiCr8020	1,006	700	2033000400
3300	3.5	21	NiCr8020	1,006	700	2033000330
2500	3.4	21	NiCr8020	1,006	700	2033000250
1600	3.6	22	NiCr8020	1,006	700	2033000160
1000	3.9	24	NiCr8020	1,006	700	2033000100
630	4.3	26	NiCr8020	1,006	700	2033000063
400	4.7	28	NiCr8020	1,006	700	2033000040
250	5.3	32	NiCr8020	1,006	700	2033000025
160	6.5	39	NiCr8020	1,006	700	2033000016