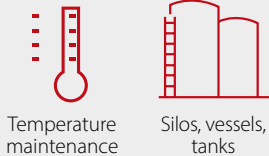


At a Glance

Applications



- › 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

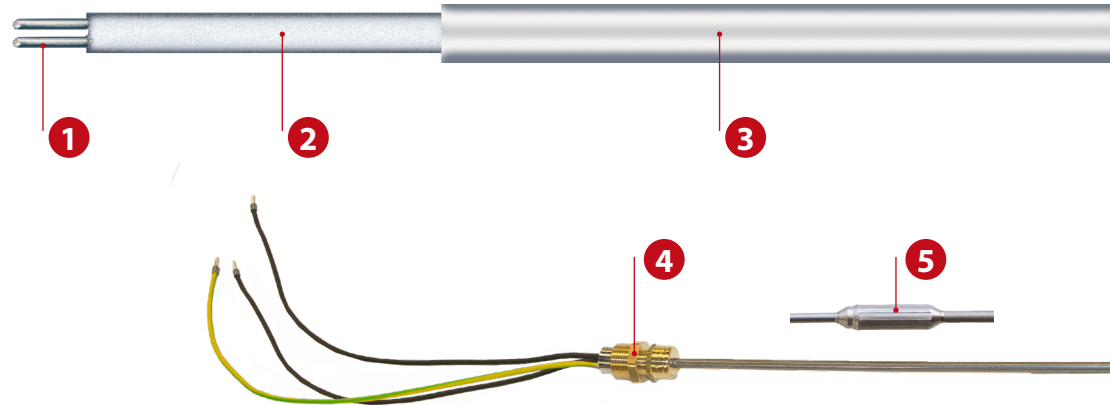
Approvals



- › 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 AY 825

up to 700 °C, twin conductor



1 Heating conductors (TWIN)	Various materials see the following pages
2 Insulation	Magnesium oxide (MgO) acc. ASTM E1652-Standard
3 Outer jacket	NiCr 2.4858 (Alloy 825)
4 Cable gland	Brass 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

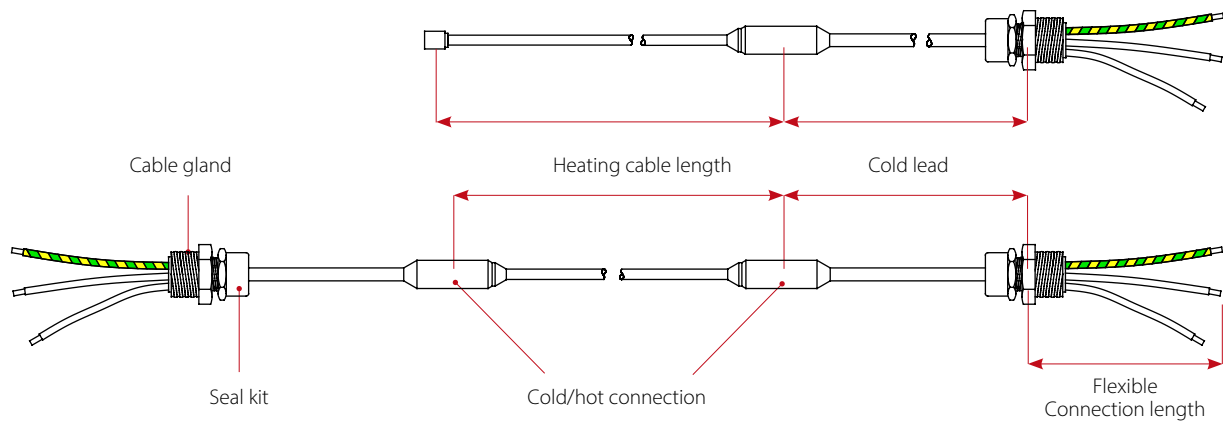
Power connection line Alloy 825, TWIN , 600 V, 2.08 mm ² , Ø 8.9 mm	20340K0027
Power connection line Alloy 825, TWIN , 600 V, 3.32 mm ² , Ø 9.7 mm	20340K0042
Power connection line Alloy 825, TWIN , 600 V, 5.17 mm ² , Ø 11.0 mm	20340K0062
Power connection line Alloy 825, TWIN , 300 V, 2.08 mm ² , Ø 7.1 mm	20340K0026
Power connection line Alloy 825, TWIN , 300 V, 3.32 mm ² , Ø 8.0 mm	20340K0041

Factory assembly

ELVB-MI-AY 825-T-2,08mm ² Laser welded, TWIN 2.08 mm ²	MAG0007
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Technical Information

Operating temperature	up to 700 °C *
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	1/2 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 – or to use the calculation tool eltherm designer.
- 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 ELK-MI AY 825 TWIN 300 VAC

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]	
36100	4.1	25	Nichrome R	0.999	1000	2034003601
29500	4.1	25	Nichrome R	0.999	1000	2034002952
24600	4.1	25	Nichrome R	0.999	1000	2034002462
19700	4.1	25	Nichrome R	0.999	1000	2034001969
16400	4.1	25	Nichrome R	0.999	1000	2034001641
13100	4.1	25	Nichrome R	0.999	1000	2034001311
10500	4.1	25	Nichrome A	1.006	1000	2034001001
8860	4.1	25	KP	1.03	1000	2034000886
8200	4.1	25	KP	1.03	1000	2034000820
6560	4.1	25	Constantan	1	900	2034000657
5580	4.1	25	Constantan	1	900	2034000558
4590	4.1	25	Constantan	1	900	2034000461
3280	4.2	25	Constantan	1	900	2034000330
2300	4.6	28	Constantan	1	900	2034000232
1640	4.8	29	Constantan	1	900	2034000166
980	4.3	26	Alloy 60	1.07	450	2034000101
820	4.3	26	Alloy 60	1.07	450	2034000083
660	4.3	26	Alloy 60	1.07	450	2034000068
490	4.4	26	Alloy 60	1.07	450	2034000051
330	4.8	29	Alloy 60	1.07	450	2034000035
230	5.2	31	Alloy 30	1.13	450	2034000027
160	5.7	34	Alloy 30	1.13	450	2034000017



Heating cable data ELK-MI AY 825 TWIN 600 VAC

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]	
36100	5.6	34	Nichrome R	0.999	1000	2034003600
29500	5.7	34	Nichrome R	0.999	1000	2034002951
24600	6	36	Nichrome R	0.999	1000	2034002461
19700	5.8	35	Nichrome R	0.999	1000	2034001968
13100	6.1	37	Nichrome A	1.006	1000	2034001312
9840	6.5	39	Nichrome A	1.006	1000	2034000985
6560	6.5	39	Nichrome R	0.999	1000	2034000656
4590	6.5	39	Constantan	1	900	2034000459
3280	6.5	39	KP	1.03	1000	2034000329
2300	6.7	40	Constantan	1	900	2034000231
1640	7.1	43	Constantan	1	900	2034000162
980	7.6	46	Constantan	1	900	2034000099
750	6.9	42	Alloy 90	1.04	600	2034000076
660	6.5	39	Alloy 90	1.04	600	2034000065
490	6.7	40	Alloy 90	1.04	600	2034000050
330	7.1	43	Alloy 60	1.07	450	2034000034
230	7.5	45	Alloy 60	1.07	450	2034000023
160	7.9	47	Alloy 60	1.07	450	2034000016
130	8.3	50	Alloy 60	1.07	450	2034000014
98	8.8	53	Alloy 60	1.07	450	2034000009
66	6.9	41	Cu	1.42	450	2034000006
52	7.1	43	Cu	1.42	450	2034000005
43	7.4	44	Cu	1.42	450	2034000004
33	7.6	46	Cu	1.42	450	2034000000