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# Mineral insulated cables Heating cables



 **ADDISON**

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## About US

Caledonian, established in 1978, offers one of the most complete lines of fiber and copper cabling system solutions with over hundreds of different cabling system products. Our superior products provide leading edge within every cable series and for every application.

Among the national and international standards with which our cables could comply are: BS - British Standard; LPCB Fire Performance Standard, ISO Standard etc. Caledonian Cables offers a comprehensive stock of cables and cabling products through its nationwide network of resellers and distributors. Caledonian Cables has continually expanded its global presence in Europe and Asia.

Caledonian & Addison, produces a wide range of cables for communication, power and electronics in its primary plants in UK, Italy and Spain. To stay in front, we continually keep expanding our manufacturing capabilities in more low cost region such as Romania, Taiwan, Malaysia etc. This low-cost manufacturing facilities enable us provide a flexible, scalable global system that delivers superior operational performance and optimal results for our customers.

Our extensive global network of manufacturing facilities gives us significant scale and the flexibility to fulfill our customer requirements. This global presence provides design and consultancy solutions that are combined with core cable manufacturing, logistic services, and vertically integrated with our E commerce technologies, to optimize customer operations by lowering costs and reducing time to market.

Caledonian & Addison has been respected for its high standards of quality, excellent service level, competitive pricing and a unique and innovative spirit. With our latest technologies, we are both inspired and well-positioned to meet the changing needs of our customers. We have the resources to diversify and to enhance our product lines and services. We understand the need for change and with our accurate planning, we are ready for the future and the promise of new marketing opportunities. Our tradition of growth through excellence is assured.

Our Design Centers work closely with customers to constantly improve its standard range of products and technologies and to develop customized, country and industry-specific solutions. Caledonian & Addison has established an extensive network of design, manufacturing, and logistics facilities in the world's major markets to serve the growing outsourcing needs of both multinational and regional customers.



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## **Mineral insulated cables**

## MI Cable

### Application

- ☑ Public buildings
- ☑ High-temperature situations
- ☑ Hazardous location
- ☑ Underground buildings
- ☑ Transportation and Traffic junction

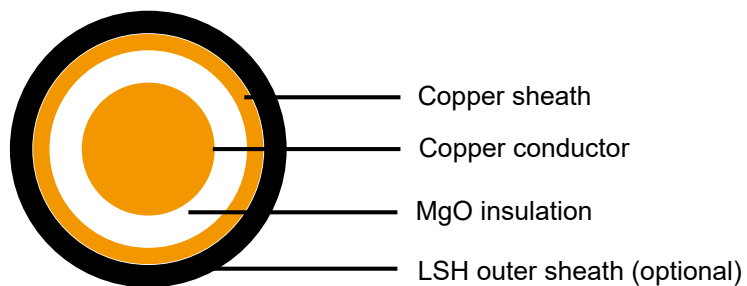
### Standard

- BS 6387
- BS EN 60702
- BS 6207

### Voltage Rating

500V, 750V

### Cable Construction



- **Conductors:** Solid plain copper conductors.
- **Insulation:** Magnesium Oxide (MgO).
- **Outer sheath:** Plain copper sheath with optional LSZH covering.
- **Corrosion protective covering:** LSF corrosion fire resistant outer sheath. (optional)



## Electrical Characteristics at 20°C

### Light Duty 0.5KV Grade

Nominal Conductor Diameter	mm	1.13	1.39	1.77	2.25
Nominal Conductor Cross Section	mm <sup>2</sup>	1.0	1.5	2.5	4.0
Maximum DC Conductor Resistance	Ω/km	18.1	12.1	7.41	4.61
Voltage Rating	KV	0.5			

### Heavy Duty 0.75KV Grade

Nominal Conductor Diameter	mm	1.39	1.77	2.25	2.75	3.57	4.50	5.66	6.66	7.75
Nominal Conductor Cross Section	mm <sup>2</sup>	1.50	2.5	4.0	6.0	10.0	16.0	25.0	35.0	50.0
Maximum DC Conductor Resistance	Ω/km	12.1	7.41	4.61	3.08	1.83	1.15	0.727	0.524	0.387
Voltage Rating	KV	0.75								

Nominal Conductor Diameter	mm	9.32	10.98	12.33	13.7	15.18	17.33	19.37	22.37
Nominal Conductor Cross Section	mm <sup>2</sup>	70.0	95.0	120.0	150.0	185.0	240.0	300	400
Maximum DC Conductor Resistance	Ω/km	0.268	0.193	0.153	0.124	0.101	0.0775	0.0601	0.047
Voltage Rating	KV	0.75							

## Mechanical and Thermal Properties

Minimum Bending Radius: 2×OD (D<7); 3×OD (7 ≤ D<12); 4×OD (12 ≤ D<15); 6×OD (D ≥ 15)

Temperature Range: -80°C to +105°C

## Cable Parameter

### Light Duty 0.5KV Grade

Cable Code	No. of cores & Nominal Conductor Cross Sectional Area No.×mm <sup>2</sup>	Cross Sectional Area of Copper Sheath mm <sup>2</sup>	Nominal Overall Diameter mm		Nominal Weight kg/km	
			With LSZH Covering	Without LSZH Covering	With LSZH Covering	Without LSZH Covering
L-MICC-300/500V-2G1	2×1.0	5.4	6.4	5.1	126	104
L-MICC-300/500V-2G1.5	2×1.5	6.3	7.0	5.7	154	136
L-MICC-300/500V-2G2.5	2×2.5	8.2	7.9	6.6	206	187
L-MICC-300/500V-2G4	2×4.0	10.7	9.2	7.7	322	248
L-MICC-300/500V-3G1	3×1.0	6.7	7.1	5.8	159	136

Cable Code	No. of cores & Nominal Conductor Cross Sectional Area No.×mm <sup>2</sup>	Cross Sectional Area of Copper Sheath mm <sup>2</sup>	Nominal Overall Diameter mm		Nominal Weight kg/km	
			With LSZH Covering	Without LSZH Covering	With LSZH Covering	Without LSZH Covering
L-MICC-300/500V-3G1.5	3×1.5	7.8	7.7	6.4	194	176
L-MICC-300/500V-3G2.5	3×2.5	9.5	8.8	7.3	272	223
L-MICC-300/500V-4G1	4×1.0	7.7	7.6	6.3	187	162
L-MICC-300/500V-4G1.5	4×1.5	9.1	8.3	7.0	231	203
L-MICC-300/500V-4G2.5	4×2.5	11.3	9.6	8.1	336	277
L-MICC-300/500V-7G1	7×1.0	11.0	9.3	7.6	269	236
L-MICC-300/500V-7G1.5	7×1.5	11.8	9.9	8.4	351	295
L-MICC-300/500V-7G2.5	7×2.5	15.4	11.2	9.7	475	411

**Heavy Duty 0.75KV Grade**

Cable Code	No. of cores & Nominal Conductor Cross Sectional Area No×mm <sup>2</sup>	Cross Sectional Area of Copper Sheath mm <sup>2</sup>	Nominal Overall Diameter mm		Nominal Weight kg/km	
			With LSZH Covering	Without LSZH Covering	With LSZH Covering	Without LSZH Covering
H-MICC-450/750V-1G6	1×6.0	8.0	7.7	6.2	213	173
H-MICC-450/750V-1G10	1×10.0	9.0	8.8	7.3	273	240
H-MICC-450/750V-1G16	1×16.0	12.0	9.8	8.3	361	326
H-MICC-450/750V-1G25	1×25.0	15.0	11.1	9.6	506	457
H-MICC-450/750V-1G35	1×35.0	18.0	12.2	10.7	650	585
H-MICC-450/750V-1G50	1×50.0	22.0	13.6	12.1	842	758
H-MICC-450/750V-1G70	1×70.0	27.0	15.2	13.7	1147	1016
H-MICC-450/750V-1G95	1×95.0	32.0	17.4	15.4	1520	1324
H-MICC-450/750V-1G120	1×120.0	37.0	18.8	16.8	1870	1612
H-MICC-450/750V-1G150	1×150.0	44.0	20.4	18.4	2230	1949
H-MICC-450/750V-1G185	1×185.0	54.0	23.2	20.4	2575	2370
H-MICC-450/750V-1G240	1×240.0	70.0	26.1	23.3	3312	3050
H-MICC-450/750V-1G300	1×300.0	79.0	28.8	26.0	3972	3791
H-MICC-450/750V-1G400	1×400.0	91.0	32.8	30.0	5211	5004
H-MICC-450/750V-2G1.5	2×1.5	11.0	9.4	7.9	259	237
H-MICC-450/750V-2G2.5	2×2.5	13.0	10.2	8.7	314	276
H-MICC-450/750V-2G4	2×4.0	16.0	11.3	9.8	398	355



Cable Code	No. of cores & Nominal Conductor Cross Sectional Area No×mm <sup>2</sup>	Cross Sectional Area of Copper Sheath mm <sup>2</sup>	Nominal Overall Diameter mm		Nominal Weight kg/km	
			With LSZH Covering	Without LSZH Covering	With LSZH Covering	Without LSZH Covering
H-MICC-450/750V-2G6	2×6.0	18.0	12.4	10.9	483	446
H-MICC-450/750V-2G10	2×10.0	24.0	14.2	12.7	697	619
H-MICC-450/750V-2G16	2×16.0	30.0	16.2	14.7	968	850
H-MICC-450/750V-2G25	2×25.0	38.0	19.1	17.1	1275	1178
H-MICC-450/750V-3G1.5	3×1.5	12.0	9.8	8.3	290	254
H-MICC-450/750V-3G2.5	3×2.5	14.0	10.8	9.3	365	323
H-MICC-450/750V-3G4	3×4	17.0	11.9	10.4	461	415
H-MICC-450/750V-3G6	3×6	20.0	13.0	11.5	590	526
H-MICC-450/750V-3G10	3×10	27.0	15.1	13.6	853	754
H-MICC-450/750V-3G16	3×16	34.0	17.1	15.6	1080	1034
H-MICC-450/750V-3G25	3×25	42.0	20.2	18.2	1548	1444
H-MICC-450/750V-4G1.5	4×1.54	14.0	10.6	9.1	344	305
H-MICC-450/750V-4G2.5	4×2.5	16.0	11.6	10.1	430	384
H-MICC-450/750V-4G4	4×4	20.0	12.9	11.4	577	507
H-MICC-450/750V-4G6	4×6	24.0	14.2	12.7	718	644
H-MICC-450/750V-4G10	4×14×160	30.0	16.3	14.8	1050	911
H-MICC-450/750V-4G16	4×16	39.0	19.3	17.3	1390	1286
H-MICC-450/750V-4G25	4×25	49.0	22.3	20.1	1943	1805
H-MICC-450/750V-7G1.5	7×1.5	18.0	12.3	10.8	478	432
H-MICC-450/750V-7G2.5	7×2.5	22.0	13.6	12.1	614	559
H-MICC-450/750V-12G1.5	12×1.555	28.0	15.8	14.1	772	712
H-MICC-450/750V-12G2.5	12×2.5	34.0	17.9	15.6	970	911
H-MICC-450/750V-19G1.5	19×1.5	37.0	18.9	16.6	1086	992



## Mineral Insulated Heating Cable, single core up to 700 °C

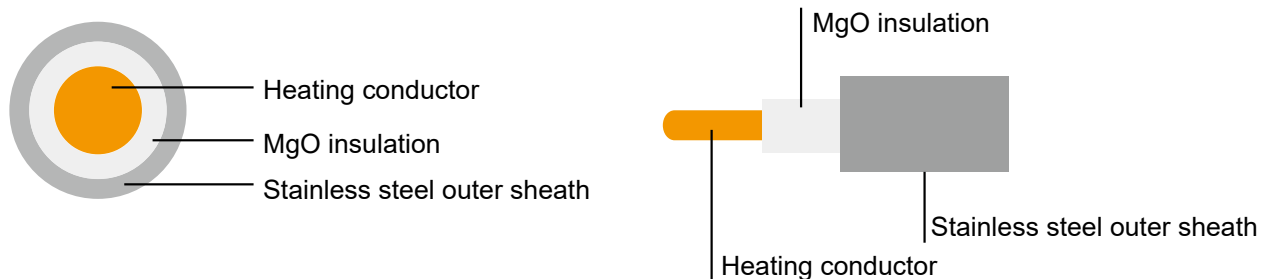
### Application

- ☑ Moisture proof applications at high outputs and temperatures
- ☑ High-temperature situations
- ☑ Can be immersed in fluids
- ☑ Chemical & petrochemical industries
- ☑ Machinery and plant construction
- ☑ Molten Salt Applications
- ☑ Vacuum technology
- ☑ Heat tracing on piping
- ☑ Heat tracing on vessels

### Voltage Rating

500V

### Cable Construction



- **Conductors:** Solid alloy or copper conductor.
- **Insulation:** Magnesium Oxide (MgO).
- **Outer sheath:** Stainless Steel 1.4541 (AISI 321).

### Mechanical and Thermal Properties

Maximum Operating temperature: 700°C  
Maximum continuous exposure temperature: 600°C  
Minimum installation temperature: -60°C  
Bending radius: 5×OD  
Nominal output: 250 W/m  
Cold lead, length: 2 x 0.50 m



## ↘ Cable Parameter

Overall Diameter mm	Resistance at 20 °C ohms/km	Temperature coefficient $\times 10^{-3}/K$
3.20	10000	0.09
3.20	6300	0.09
3.20	4000	0.09
3.40	2500	0.09
3.60	1600	0.09
3.90	1000	0.09
4.30	630	0.09
4.70	400	0.09
5.30	250	0.09
6.50	160	0.09

## Mineral Insulated Heating Cable, single core up to 480 °C

### Application

- ☑ Moisture proof applications at high outputs and temperatures
- ☑ High-temperature situations
- ☑ Can be immersed in fluids
- ☑ Chemical & petrochemical industries
- ☑ Machinery and plant construction
- ☑ Molten Salt Applications
- ☑ Vacuum technology
- ☑ Heat tracing on piping
- ☑ Heat tracing on vessels

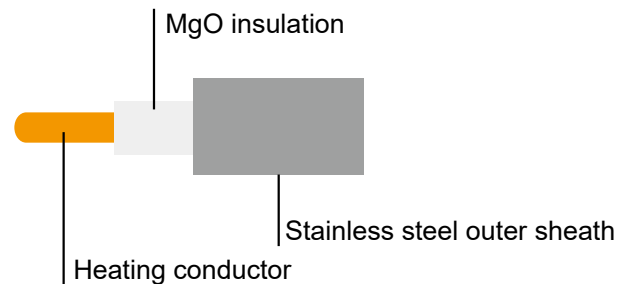
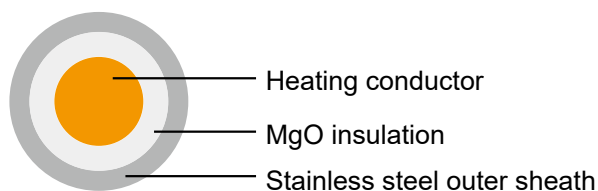
### Standard

EN 60079-30-1

### Voltage Rating

500V

### Cable Construction



- **Conductors:** Solid alloy or copper conductor.
- **Insulation:** Magnesium Oxide (MgO).
- **Outer sheath:** Stainless Steel 1.4541 (AISI 321).

### Mechanical and Thermal Properties

Maximum Operating temperature: 480°C  
 Maximum continuous exposure temperature: 600°C  
 Minimum installation temperature: -60°C  
 Bending radius: 6×OD  
 Nominal output: 250 W/m  
 Cold lead, length: 2 x 0.50 m  
 Cold lead, cross section: 2.50 mm<sup>2</sup>  
 Impact resistance: 7 J



## ↘ Cable Parameter

Overall Diameter mm	Resistance at 20 °C ohms/km	Temperature coefficient $\times 10^{-3}/K$
3.20	10000	0.09
3.20	6300	0.09
3.20	4000	0.09
3.40	2500	0.09
3.60	1600	0.09
3.90	1000	0.09
4.30	630	0.09
4.70	400	0.09
5.30	250	0.09
6.50	160	0.09

## Mineral Insulated Heating Cable, twin core up to 700 °C

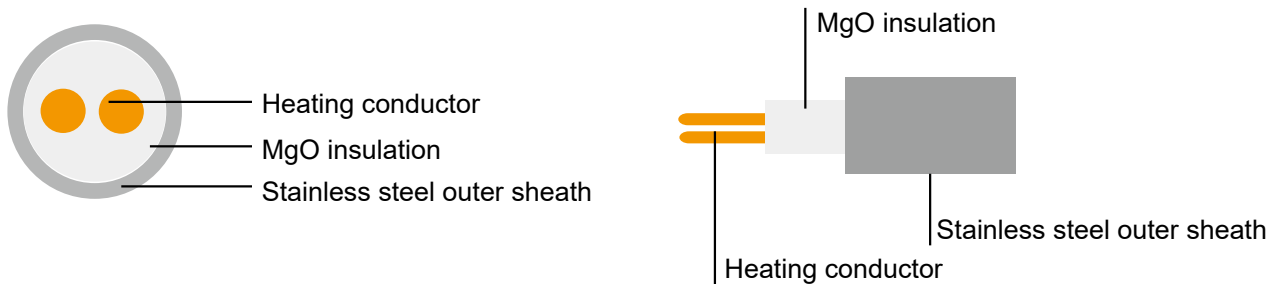
### Application

- ☑ Moisture proof applications at high outputs and temperatures
- ☑ High-temperature situations
- ☑ Can be immersed in fluids
- ☑ Chemical & petrochemical industries
- ☑ Machinery and plant construction
- ☑ Molten Salt Applications
- ☑ Vacuum technology
- ☑ Heat tracing on piping
- ☑ Heat tracing on vessels

### Voltage Rating

400V

### Cable Construction



- **Conductors:** Solid alloy or copper conductor.
- **Insulation:** Magnesium Oxide (MgO).
- **Outer sheath:** Stainless Steel 1.4541 (AISI 321).

### Mechanical and Thermal Properties

Maximum Operating temperature: 700°C

Bending radius: 8×OD

Nominal output: 250 W/m

Cold lead, length: 2 x 0.50 m

Cold lead, cross section: 1.50 mm<sup>2</sup>



## ↘ Cable Parameter

Overall Diameter mm	Resistance at 20 °C ohms/km	Temperature coefficient $\times 10^{-3}/K$
3.20	36000	0.09
4.00	24600	0.09
3.80	19680	0.09
4.40	13120	0.09
5.10	9840	0.09
5.00	4600	0.09
5.30	4600	0.09
4.00	3200	0.04
5.00	2460	0.04
4.70	1600	0.04
4.40	1000	0.5
5.10	750	0.5
6.70	330	0.5

# **Constant Wattage Heating Cable**



## Constant Wattage Heating Cable up to 200 °C

### Application

- ☑ Vessels, piping, valves
- ☑ Food processing industry
- ☑ Frost protection and temperature maintenance on pumps

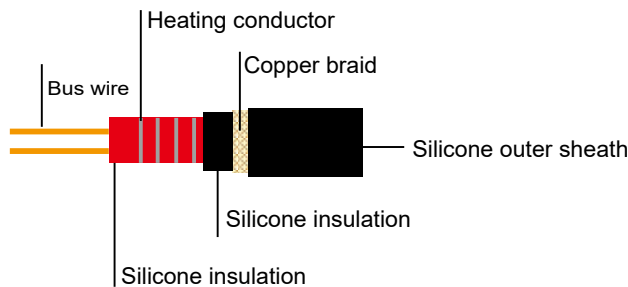
### Standard

IEC 62395-2, EN 60519-10.

### Voltage Rating

230V

### Cable Construction



- **Bus wire**
- **Insulation:** Silicone.
- **Heating conductor**
- **Protective:** Copper braid .
- **Outer sheath:** Silicone.

### Mechanical and Thermal Properties

Nominal temperature: 200°C  
 Minimum installation temperature: -60°C  
 Minimum start-up temperature: -60°C  
 Bus wire cross section: 2x1.50 mm<sup>2</sup>

### Cable Parameter

APPROX. Dimensions mm	Contact spacing m	Nominal output W/m	Maximum heating circuit length m	
			at 50 °C	at 150 °C
5.25x9.75	1.0	10	198	147
5.25x9.75	1.0	20	139	102.5
5.25x9.75	1.0	30	98	82.5
5.25x9.75	1.0	40	73.5	70.5



## Constant Wattage Heating Cable up to 260 °C

### Application

- ☑ Vessels, piping, valves
- ☑ Food processing industry
- ☑ Frost protection and temperature maintenance on pumps

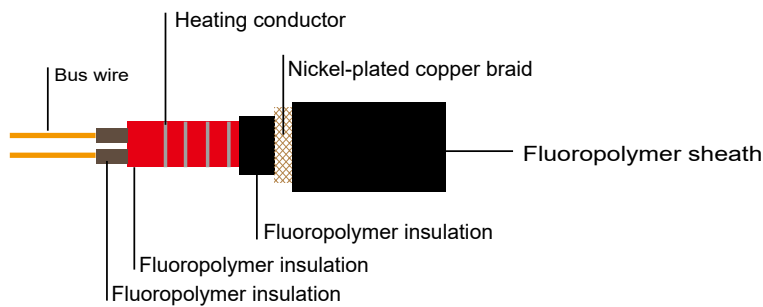
### Standard

DIN VDE 0721-52  
EN 62395-1; 2007-05

### Voltage Rating

230V

### Cable Construction



- **Bus wire.**
- **Insulation:** Fluoropolymer.
- **Heating conductor.**
- **Protective:** Nickel-plated copper braid.
- **Outer sheath:** Fluoropolymer.

### Mechanical and Thermal Properties

Nominal temperature: 260°C  
 Minimum installation temperature: -45°C  
 Minimum start-up temperature: -45°C  
 Bus wire cross section: 2x1.5 mm<sup>2</sup>  
 Minimum bending radius: 25mm

### Cable Parameter

APPROX. Dimensions mm	Contact spacing m	Nominal output W/m	Maximum working temperature °C	Maximum heating circuit length m	
				at 50 °C	at 150 °C
8.0x5.5	1.0	15	205	161	119
8.0x5.5	1.0	30	190	98	82.5



APPROX. Dimensions mm	Contact spacing m	Nominal output W/m	Maximum working temperature °C	Maximum heating circuit length m	
				at 50 °C	at 150 °C
8.0x5.5	1.0	45	175	65.5	65.5
8.0x5.5	1.0	60	160	50	50

## Fluoropolymer-insulated Heating Cable up to 260 °C

### Application

- ☑ Vessels, piping, valves
- ☑ Small components
- ☑ Industrial areas
- ☑ Rotor blades
- ☑ Marble plates

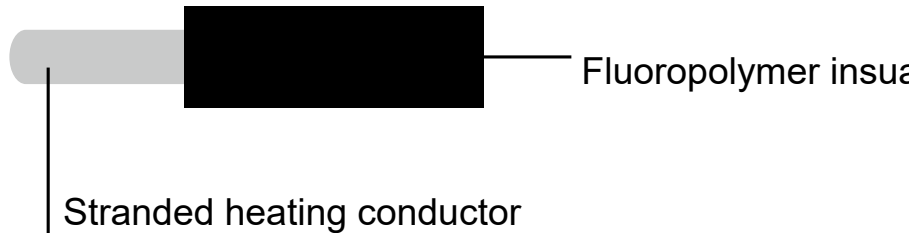
### Standard

DIN VDE 0253

### Voltage Rating

750V

### Cable Construction



- **Heating conductor.**
- **Insulation:** Fluoropolymer.

### Mechanical and Thermal Properties

Maximum operating temperature: 260°C  
 Minimum installation temperature: -60°C  
 Minimum bending radius: 2.5xOD  
 Maximum output: 30 W/m  
 Nominal resistance of heating conductor: 8000 Ω/km

### Cable Parameter

Nominal resistance Ω/km	APPROX. outer diameter mm	7APPROX. weight g/m	Temperature coefficient x 10 <sup>-3</sup> /K
1.95	5.8	112	4.3
2.90	4.6	73	4.3
4.40	4.2	54	4.3
7.20	3.1	33	4.3
10.0	3.0	31	4.3
11.7	2.7	30	4.3



Nominal resistance $\Omega/\text{km}$	APPROX. outer diameter mm	7APPROX. weight g/m	Temperature coefficient $\times 10^{-3}/\text{K}$
15.0	2.6	19	4.3
25.0	2.5	17	3.0
31.5	2.9	23	1.6
50.0	2.6	17	1.6
65.0	2.4	14	0.9
80.0	2.7	20	0.9
100.0	2.5	17	0.45
157.0	2.5	17	0.45
180.0	2.2	12	0.90
200.0	2.4	14	0.45
260.0	2.2	12	0.45
280.0	2.1	10	0.38
328.0	2.5	16	0.18
360.0	2.1	10	0.45
430.0	2.3	13	0.18
480.0	2.2	12	0.18
600.0	2.1	10	0.18
800.0	2.0	9	0.18
1000.0	2.1	10	0.04
1470.0	2.1	9	0.04
1750.0	2.0	8	0.04
1900.0	2.2	12	0.04
2900.0	2.1	9	0.04
4000.0	2.0	8	0.04
4700.0	1.9	8	0.15
6000.0	1.9	7	0.20
7000.0	2.0	7	0.15
8000.0	2.0	7	0.15

## Fluoropolymer-insulated Heating Cable up to 260 °C with Protective Braid Cu/Ni

### Application

- ☑ Vessels, piping, valves
- ☑ Small components
- ☑ Industrial areas
- ☑ Rotor blades
- ☑ Marble plates

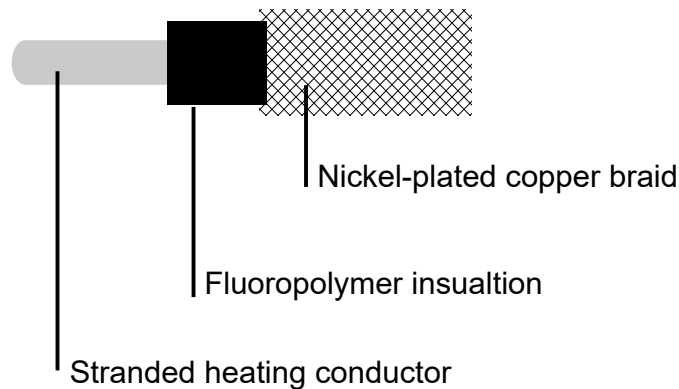
### Standard

DIN VDE 0253

### Voltage Rating

750V

### Cable Construction



- **Heating conductor.**
- **Insulation:** Fluoropolymer.
- **Protective:** Nickel-plated copper braid.

### Mechanical and Thermal Properties

Maximum operating temperature: 260°C

Minimum installation temperature: -60°C

Minimum bending radius: 2.5xOD

Maximum output: 30 W/m

Nominal resistance of heating conductor: 8000 Ω/km



## ▾ Cable Parameter

Nominal resistance $\Omega/\text{km}$	APPROX. outer diameter mm	7APPROX. weight g/m	Temperature coefficient $\times 10^{-3}/\text{K}$
1.95 (Cu 10mm <sup>2</sup> )	7.11	157.0	4.3
2.90 (Cu 6mm <sup>2</sup> )	5.99	104.9	4.3
4.40 (Cu 4mm <sup>2</sup> )	4.73	69.8	4.3
7.20 (Cu 2.5mm <sup>2</sup> )	3.89	48.3	4.3
10.0	3.62	40.6	4.3
11.7 (Cu 1.5mm <sup>2</sup> )	3.53	37.6	4.3
15.0	3.20	33.6	4.3
25.0	3.15	31.1	3.0
31.5	3.55	39.6	1.6
50.0	3.15	31.3	1.6
65.0	3.04	28.6	1.6
80.0	3.32	34.5	0.9
100.0	3.11	31.0	0.9
157.0	3.10	31.2	0.45
180.0	2.84	25.8	0.45
200.0	2.98	28.2	0.45
260.0	2.87	26.3	0.45
280.0	2.76	24.3	0.38
328.0	3.13	30.6	0.18
360.0	2.71	23.7	0.45
430.0	2.96	27.6	0.18
480.0	2.94	26.8	0.18
600.0	2.80	24.9	0.18
800.0	2.69	23.2	0.18
1000.0	2.81	24.9	0.04
1470.0	2.64	22.6	0.04
1750.0	2.66	22.3	0.04
1900.0	2.84	25.6	0.40
2900.0	2.68	23.1	0.40
4000.0	2.61	21.9	0.40
4700.0	2.55	21.6	0.15
6000.0	2.49	20.6	0.20
7000.0	2.43	19.9	0.15
8000.0	2.41	19.7	0.15

## Fluoropolymer-insulated Heating Cable up to 260 °C with Protective Braid+Outer Sheath

### Application

- ☑ Heat tracing on tanks
- ☑ Pipe, valve and pump heating
- ☑ Heat tracing on filters
- ☑ Heat tracing on hoppers
- ☑ Heat tracing on vessels

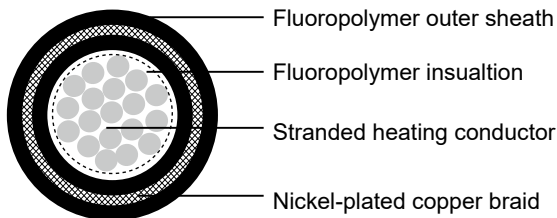
### Standard

DIN VDE 0253

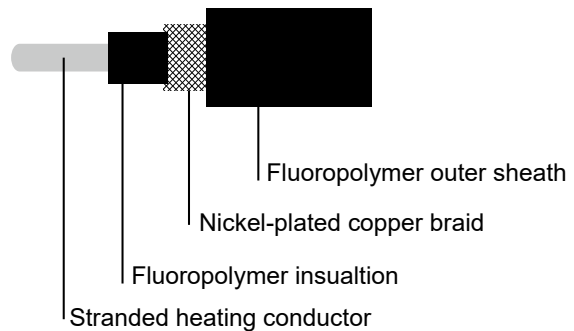
### Voltage Rating

750V

### Cable Construction



- **Heating conductor**
- **Insulation:** Fluoropolymer.
- **Protective:** Nickel-plated copper braid.
- **Outer sheath:** Fluoropolymer.



### Mechanical and Thermal Properties

Maximum operating temperature: 260°C  
 Minimum installation temperature: -60°C  
 Minimum bending radius: 2.5xOD  
 Maximum output: 30 W/m  
 Nominal resistance of heating conductor: 8000 Ω/km

### Cable Parameter

Nominal resistance Ω/km	APPROX. outer diameter mm	7APPROX. weight g/m	Temperature coefficient x 10 <sup>-3</sup> /K
1.95 (Cu 10mm <sup>2</sup> )	7.7	156.0	4.3
2.90 (Cu 6mm <sup>2</sup> )	6.4	110	4.3
4.40 (Cu 4mm <sup>2</sup> )	5.6	85	4.3



Nominal resistance $\Omega/\text{km}$	APPROX. outer diameter mm	7APPROX. weight g/m	Temperature coefficient $\times 10^{-3}/\text{K}$
7.20 (Cu 2.5mm <sup>2</sup> )	4.5	53	4.3
10.0	4.2	51	4.3
11.7 (Cu 1.5mm <sup>2</sup> )	4.1	48	4.3
15.0	3.9	44	4.3
25.0	3.8	43	3.0
31.5	4.1	45	1.6
50.0	3.8	43	1.6
65.0	3.6	42	1.6
80.0	3.9	55	0.9
100.0	3.8	53	0.9
157.0	3.8	40	0.45
180.0	3.5	38	0.9
200.0	3.6	39	0.45
260.0	3.5	38	0.45
280.0	3.4	35	0.38
328.0	3.78	35.2	0.18
360.0	3.3	33	0.45
430.0	3.5	38	0.18
480.0	3.5	39	0.18
600.0	3.4	35	0.18
800.0	3.3	34	0.18
1000.0	3.4	35	0.04
1470.0	3.2	40	0.04
1750.0	3.2	38	0.04
1900.0	3.5	39	0.40
2900.0	3.3	32	0.40
4000.0	3.2	31	0.40
4700.0	3.2	31	0.15
6000.0	3.2	38	0.20
7000.0	3.2	36	0.15
8000.0	3.2	33	0.15



## Fluoropolymer-insulated Heating Cable Factory Terminated

### Application

- Vessels, piping, valves
- Small components
- Industrial areas
- Heat tracing on molds
- Heat tracing on satellite dishes

### Standard

DIN VDE 0253

### Voltage Rating

230V

### Cable Construction

- **Heating conductor**
- **Insulation:** Fluoropolymer.
- **Protective:** VA 1.4401 / SS 316.

### Mechanical and Thermal Properties

Maximum operating temperature: 260°C

Minimum installation temperature: -60°C

Minimum bending radius: 2.5xOD

Maximum output: 25 W/m

### Cable Parameter

Heated length m	Nominal output W		
	Maximum temperature 100 °C	Maximum temperature 150 °C	Maximum temperature 200 °C
1.2	30	-	-
2.2	54	-	-
3.4	78	52	26
4.8	94	69	37
6.0	147	88	44
8.4	210	126	63
10.8	245	163	82
25.0	294	176	88
30.0	705	441	220



Heated length m	Nominal output W		
	Maximum temperature 100 °C	Maximum temperature 150 °C	Maximum temperature 200 °C
35.0	864	521	-
42.0	1008	611	315
56.0	1390	756	378

## Heating Tape for Sensitive Surfaces

### Application

- ☑ Heat tracing on apparatus, appliances and systems
- ☑ Devices and systems made of glass with sensitive surfaces
- ☑ Laboratory applications

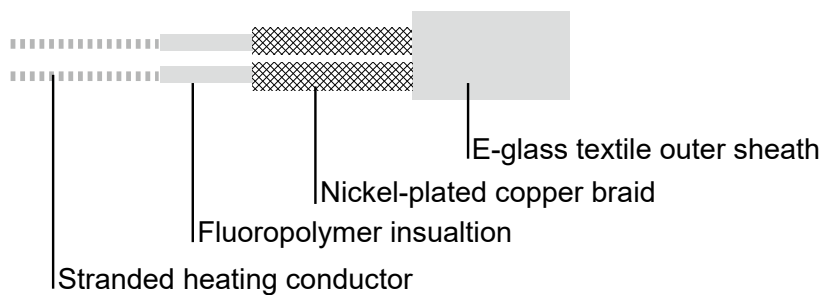
### Standard

DIN VDE 0253

### Voltage Rating

230V

### Cable Construction



- **Heating conductor**
- **Insulation:** Fluoropolymer.
- **Protective:** Nickel-plated copper.
- **Outer sheath:** E-glass textile.

### Mechanical and Thermal Properties

Maximum operating temperature: 260°C  
 Minimum installation temperature: -60°C  
 Minimum bending radius flat: 10 mm  
 Maximum output: 50 W/m  
 Approx Dimensions : 25 x 6 mm

### Cable Parameter

Heated length m	Nominal output W		
	Maximum temperature 100 °C	Maximum temperature 150 °C	Maximum temperature 200 °C
0.6	30	-	-
1.1	54	-	-
1.7	78	52	26



Heated length m	Nominal output W		
	Maximum temperature 100 °C	Maximum temperature 150 °C	Maximum temperature 200 °C
2.4	94	69	37
3.0	147	88	44
4.2	210	126	63
5.4	245	163	82
6.0	294	176	88
7.0	344	-	-
10.0	464	294	-
12.5	623	371	192
15.0	705	441	220
17.5	864	521	-
21.0	1008	611	315
28.0	1390	756	378

## Heating Tape for Corrosive Environments

### Application

- ☑ Heat tracing on apparatus, appliances and systems
- ☑ Temperature maintenance on piping
- ☑ Laboratory applications

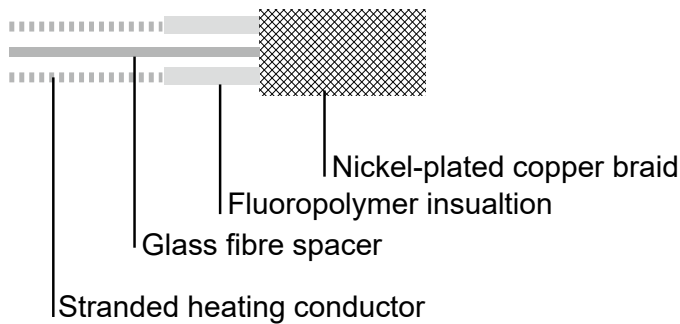
### Standard

DIN VDE 0253

### Voltage Rating

230V

### Cable Construction



- **Heating conductor**
- **Insulation:** Fluoropolymer.
- **Protective:** 1.4301 / SS 304.

### Mechanical and Thermal Properties

Maximum operating temperature: 260°C  
 Minimum installation temperature: -30°C  
 Minimum bending radius flat: 15 mm  
 Maximum output: 50 W/m  
 Approx Dimensions : 10 x 5 mm  
 Dimensions, sleeve: 32 x 16 x 65 mm

### Cable Parameter

Heated length m	Nominal output W		
	Maximum temperature 100 °C	Maximum temperature 150 °C	Maximum temperature 200 °C
0.6	30	-	-
1.1	54	-	-
1.7	78	52	26



Heated length m	Nominal output W		
	Maximum temperature 100 °C	Maximum temperature 150 °C	Maximum temperature 200 °C
2.4	94	69	37
3.0	147	88	44
4.2	210	126	63
5.4	245	163	82
6.0	294	176	88
7.0	344	-	-
10.0	464	294	-
12.5	623	371	192
15.0	705	441	220
17.5	864	521	-
21.0	1008	611	315
28.0	1390	756	378

# **Self-regulating Heating Cable**



## Self-regulating Heating Cable Type ELSR-N up to 80°C

### ➤ Applications:

- ☑ Frost protection
- ☑ Heat tracing on level indicators
- ☑ Chemical & petrochemical industries
- ☑ Tank bottom heating of LNG storage tanks
- ☑ Pipe heat tracing
- ☑ Vessels and tanks
- ☑ Automotive
- ☑ Food processing industry

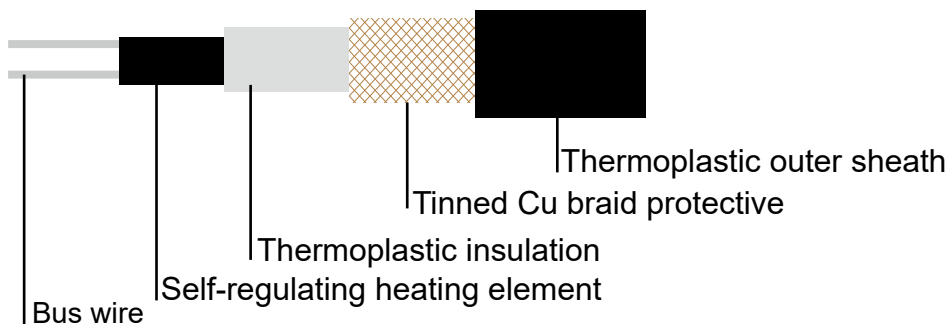
### ➤ Standard

EN 62395-1

### ➤ Voltage Rating

230V

### ➤ Cable Construction



- **Bus wire:** Nickel plated copper.
- **Self-regulating heating element**
- **Insulation:** Thermoplastic.
- **Protective:** Tinned Cu braid.
- **Outer sheath:** Thermoplastic or fluoropolymer.

### ➤ Mechanical and Thermal Properties

Maximum maintenance temperature: 65°C  
Maximum exposure temperature: 85°C  
Minimum installation temperature: -51°C  
Minimum bending radius: 25 mm



## ↘ Cable Parameter

APPROX. Dimension mm	Nominal output at 10°C W/m	APPROX. Weigh g/m
13.6×5.5	10	91
14.1×5.8	10	108
13.8×5.6	10	108
13.6×5.5	20	91
14.1×5.8	20	108
13.8×5.6	20	108
13.6×5.5	30	91
14.1×5.8	30	108
13.8×5.6	30	108
13.6×5.5	40	91
14.1×5.8	40	108
13.8×5.6	40	108



## Type ELSR-M-AF/BF up to 65°C

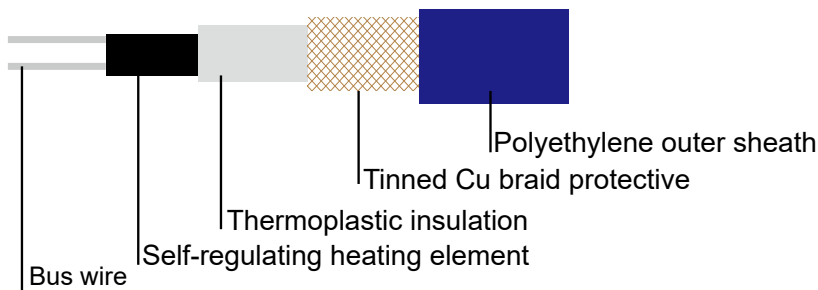
### Applications:

- ☑ Internal trace heating for pipes and hoses

### Voltage Rating

230V

### Cable Construction



- **Bus wire:** Nickel plated copper.
- **Self-regulating heating element**
- **Insulation:** Thermoplastic.
- **Protective:** Tinned Cu braid.
- **Outer sheath:** Polyethylene.

### Mechanical and Thermal Properties

Maximum maintenance temperature: 65°C

Maximum exposure temperature: 65°C

Minimum installation temperature: -45°C

Minimum bending radius: 25 mm

### Cable Parameter

APPROX. Dimension mm	Nominal output at 10°C W/m	APPROX. Weigh g/m
7.5×4.9	10	62
7.0×4.6	10	53

## Type ELSR-H up to 210°C

### ➤ Applications:

- ☑ Chemical & petrochemical industries
- ☑ Oil & gas industry
- ☑ Power plants
- ☑ Ex-areas
- ☑ Frost protection
- ☑ Water & sanitation utilities
- ☑ Temperature maintenance on vessels, pipes & valves

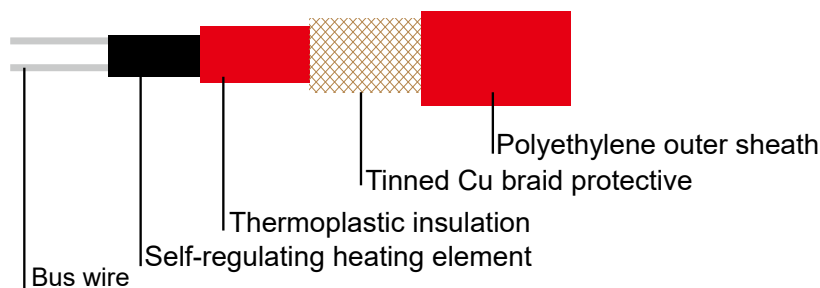
### ➤ Standard

EN 62395-1

### ➤ Voltage Rating

230V

### ➤ Cable Construction



- **Bus wire:** Nickel plated copper.
- **Self-regulating heating element**
- **Insulation:** Thermoplastic.
- **Protective:** Tinned Cu braid.
- **Outer sheath:** TPE-O Fluoropolymer.

### ➤ Mechanical and Thermal Properties

Maximum maintenance temperature: 120°C

Maximum exposure temperature: 210°C

Minimum installation temperature: -45°C

Minimum bending radius: 25 mm



## ▾ Cable Parameter

APPROX. Dimension mm	Nominal output at 10°C W/m	APPROX. Weigh g/m
12.4×5.0	10	120
12.4×5.0	15	120
12.4×5.0	20	120
12.4×5.0	30	120
12.4×5.0	45	120
12.4×5.0	60	120
12.4×5.0	75	120



# Caledonian

[www.caledonian-cables.co.uk](http://www.caledonian-cables.co.uk)  
[sales@caledonian-cables.co.uk](mailto:sales@caledonian-cables.co.uk)

[www.addison-cables.com](http://www.addison-cables.com)  
[sales@addison-cables.com](mailto:sales@addison-cables.com)

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