eltherm®

Type ELSR-H
up to 180 °C

At a Glance

Applications

Freeze prevention

Temperature maintenance

Valves, pumps

Silos, vessels, tanks

- Chemistry and Petrochemistry
- Oil and Gas Industry
- Power plants
- Water and sanitation utilities

Advantages

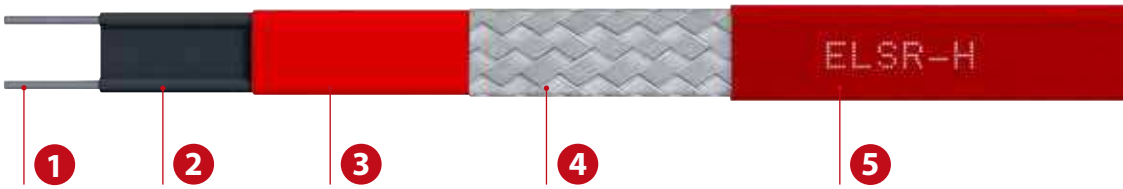
- Seven nominal outputs
- Moisture proof
- Resistant to chemicals
- Use in hazardous areas

Design

BOT Protective braid, fluoropolymer outer jacket

Approvals

- Cable classification
  II 2G Ex 60079-30-1 IIC Gb
  II 2D Ex 60079-30-1 IIIC Db
- System classification
  IBExU II 2G Ex e IIC T3 Gb
  II 2G Ex 60079-30-1 eb IIC T3 Gb
  IBExU II 2G Ex e IIC T4...T6 Gb
  II 2D Ex 60079-30-1 tb IIIC T200°C Db
- Certification
  EPS 12 ATEX 1 429 U
  EPS 19 ATEX 1013 X
- Temperature class
  T3 to T6



1	**Bus wire**	Nickel plated copper
2	**Self-regulating heating element**	
3	**Insulation**	
4	**Protection**	Protective braid (Cu, tin plated)
5	**Outer jacket**	TPE-O, Fluoropolymer

Checklist ELSR-H

Power Connection & End Termination		
EL-ECSH-Ex	Silicone termination cap, red, glued, with ex marking	0X81EH2
Ex-Con-SR	Ex connection sleeve Ø 36 x 210 mm 4J	0X81125
ELVB-SREx-25	Power connection, glued, Gland M25 x 1,5, PE	0X81PA1
ELVB-SREx-IT	Power connection, glued, without gland	091AIT1
ELVB-SRV-H	Connection set, shrink-fit	0911117
ELVB-SRAH-25	Power connection, glued, Gland M25 x 1,5, PE	091A040
Junction Boxes		
ELAK-Ex-3.7	122 x 120 x 90, 1-3 heaters, power supply lead max. 10 mm², IP66	0X80057
Ex-it-R	ø 150 x 125 mm, 3 heaters, 1 Pt100 power supply lead, incl. mounting stand, IP 65	0X80070
ELAK-Ex-3.5	122 x 120 x 90 mm, 1 heater, capillary thermostat, IP 66	0X80055
ELAK-5	122 x 120 x 90 mm, polyester, 3 breakouts M25, IP 66	0920013
Temperature Sensors		
ELTF-PTEx.2	Pt100, 4 conductors, 3 m PTFE cable	0X70002
ELTF-PTEx.4	2x Pt100, 3 conductors, 3 m cold lead	0X70030
ELTF-PT.1	Pt100, 5 x 50 mm PVC 5 m	0650001
ELTF-PT.3	Pt100, 2 conductors, 5 x 50 mm, 3 m PTFE cable	0650003
ELTF-PT.3.1	Pt100, 3 conductors, 5 x 50 mm, 3 m PTFE cable	0650002

eltherm®

Technical Information

Maximum ambient temperature, energized	120 °C
Maximum ambient temperature, de-energized	180 °C
Nominal voltage*	230 V
Bending radius, min.	25 mm
Installation temperature, min.	– 60 °C

*Further power inputs on request

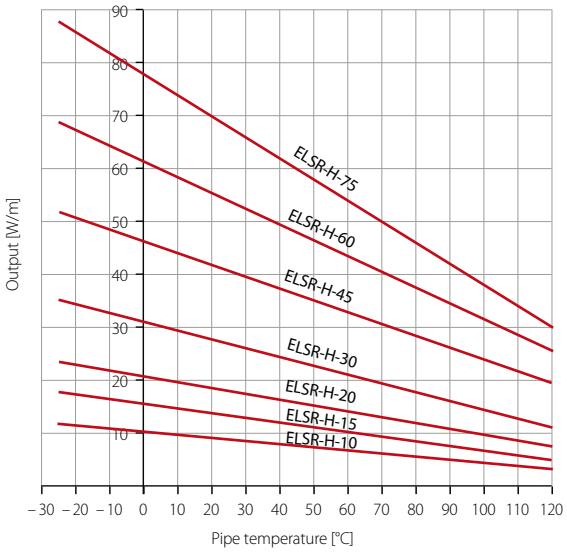
Heating circuit lengths on the following conditions

- 230 V nominal voltage
- Delayed action circuit breakers (C-characteristic) with 80 % maximum load
- Maximum 10 % line voltage drop on heating cable bus wire
- Power connection to one heater end

Type	Nominal output	Dimensions approx. (mm)	Weight approx. (g/m)	Part No.
ELSR-H-10-2-BOT	10 W/m at 10 °C	12.4 x 5.0	120	B0221103
ELSR-H-15-2-BOT	15 W/m at 10 °C	12.4 x 5.0	120	B0221153
ELSR-H-20-2-BOT	20 W/m at 10 °C	12.4 x 5.0	120	B0221203
ELSR-H-30-2-BOT	30 W/m at 10 °C	12.4 x 5.0	120	B0221303
ELSR-H-45-2-BOT	45 W/m at 10 °C	12.4 x 5.0	120	B0221453
ELSR-H-60-2-BOT	60 W/m at 10 °C	12.4 x 5.0	120	B0221603
ELSR-H-75-2-BOT	75 W/m at 10 °C	12.4 x 5.0	120	B0221753

ELSR-H-...-2-BOT output

(on insulated metallic pipes according to 62395-1)



Switch-on temperature (°C)	Nominal cutout value (A)	Heating circuit length (m) for			
		ELSR-H-10-2	ELSR-H-15-2	ELSR-H-20-2	ELSR-H-30-2
10	16	193.0	158.0	122.0	82.0
	20	193.0	158.0	136.0	102.0
	25	193.0	158.0	136.0	111.0
	32	193.0	158.0	136.0	111.0
0	16	189.0	153.0	116.0	77.0
	20	189.0	153.0	132.0	97.0
	25	189.0	153.0	132.0	108.0
	32	189.0	153.0	132.0	108.0
-10	16	184.0	146.0	110.0	73.0
	20	1840.	148.5	129.0	92.0
	25	1840.	148.5	129.0	105.5
	32	184.0	148.5	129.0	105.5
-20	16	180.0	139.0	104.0	70.0
	20	180.0	145.0	125.5	87.0
	25	180.0	145.0	125.5	103.0
	32	180.0	145.0	125.5	103.0
-40	16	173.0	126.0	95.0	64.0
	20	173.0	138.0	119.0	80.0
	25	173.0	138.0	120.0	98.0
	32	173.0	138.0	120.0	98.0

Switch-on temperature (°C)	Nominal cutout value (A)	Heating circuit length (m) for		
		ELSR-H-45-2	ELSR-H-60-2	ELSR-H-75-2
10	16	55.0	41.0	33.0
	20	68.0	51.0	41.5
	25	85.0	64.0	51.5
	32	91.0	79.0	66.0
0	16	52.0	39.0	30.0
	20	65.0	49.0	37.5
	25	81.0	61.0	47.0
	32	88.5	77.0	60.0
-10	16	50.0	37.0	28.5
	20	62.0	46.0	35.5
	25	77.0	58.0	44.5
	32	86.5	70.0	57.0
-20	16	47.0	36.0	26.5
	20	59.0	44.0	33.5
	25	74.0	56.0	41.5
	32	84.5	67.0	53.5
-40	16	43.0	33.0	23.5
	20	54.0	41.0	29.0
	25	68.0	51.0	36.5
	32	81.0	61.0	46.5

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