

## At a Glance

### Applications



Freeze prevention



Pipelines

- › In-pipe trace heating approved for potable water pipes and flexible tubes

### Advantages

- › Officially approved
- › Can be used in liquids
- › Suitable for drinking water
- › Small dimensions

### Design

**AF** Aluminium foil, outer jacket

**BF** Protective braid, outer jacket

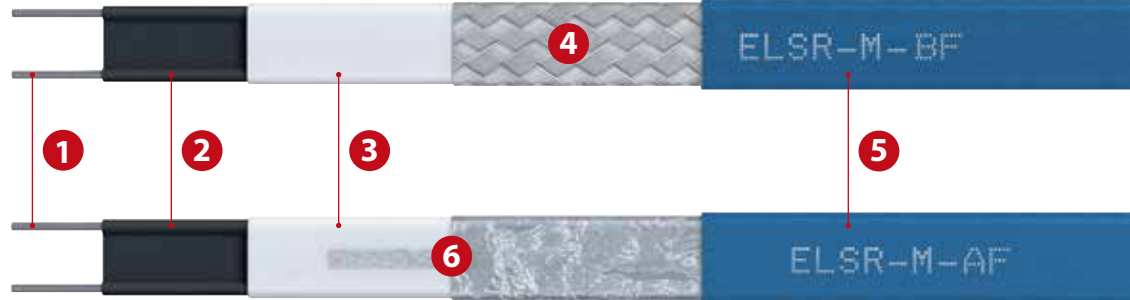
### Approvals



- › Certification K-229437-13-Bs/st

# Type ELSR-M-AF/BF

## up to 65 °C



<b>1 Bus wire</b>	Nickel plated copper
<b>2 Self-regulating heating element</b>	
<b>3 Insulation</b>	
<b>4 Protection</b>	Protective braid (Cu, tin plated)
<b>5 Outer jacket</b>	TPE-O
<b>6 Protective conductor connection</b>	see 4 or Cu, tin plated with aluminium foil

## Checklist ELSR-M-AF/BF

### Power Connection & End Termination

ELVB-70	Cable gland Ms 3/4", brass, approved for drinking water	0911703
ELVB-71	Y-connector 32 mm, brass, approved for drinking water	0911704
ELVB-SRAM-25	Power connection, shrink-fit, Gland M25 x 1,5, PE	091A015
EL-ECMF	Silicone termination cap, glued, transparent	09112MF
ELVB-SRV-M	Connection set, shrink-fit	0911122

### Junction Boxes

ELAK-2	104 x 104 x 70 mm, polycarbonate, breakouts 7x M25, IP 66	0920030
ELAK-5	122 x 120 x 90 mm, polyester, 3 breakouts M25, IP 66	0920013
ELAK-5.1	130 x 130 x 75 mm, polycarbonate, breakouts 9x M20/M25, IP 66	0920002

### Temperature Sensors

ELTF-PT.1	Pt100, 5 x 50 mm PVC 5 m	0650001
ELTF-PT.3	Pt100, 2 conductor, 5 x 50 mm, 3 m PTFE cable	0650003
ELTF-PT.3.1	Pt100, 3 conductor, 5 x 50 mm, 3 m PTFE cable	0650002

## Technical Information

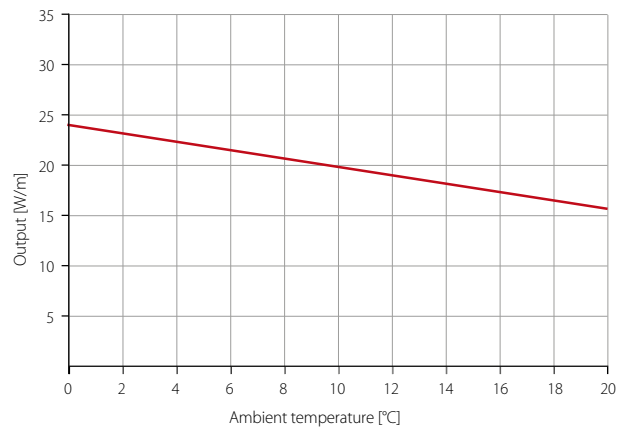
Maximum ambient temperature, energized	65 °C
Maximum ambient temperature, de-energized	65 °C
Nominal voltage	230 V
Bending radius, min.	25 mm
Installation temperature, min.	- 45 °C

### 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

### ELSR-M-10-2-AF/BF output

(in a filled water pipeline)



Switch-on temperature (°C)	Nominal cutout value (A)	Heating circuit length (m) for	
		ELSR-M-10-2-AF/BF	
10	10	74.0	
	16	89.5	
	20	89.5	
0	10	61.5	
	16	89.5	
	20	89.5	
-30	10	61.5	
	16	89.5	
	20	89.5	

Type	Nominal output	Dimensions approx. (mm)	Weight approx. (g/m)	Part No.
ELSR-M-10-2-BF	10 W/m at 10 °C	7.5 x 4.9	62	B0225104
ELSR-M-10-2-AF	10 W/m at 10 °C	7.0 x 4.6	53	B0225105