

## At a Glance

### Applications



Freeze prevention



Open area

- › Parking garages entrances, exits
- › Helicopter landing sites
- › Concrete ramps
- › Stairs and footpaths

### Benefits

- › Highly robust
- › Suited for hardest installing conditions
- › Flexible mounting
- › Radially and longitudinally waterproof
- › Outer jacket is strongly grouted with protective braid

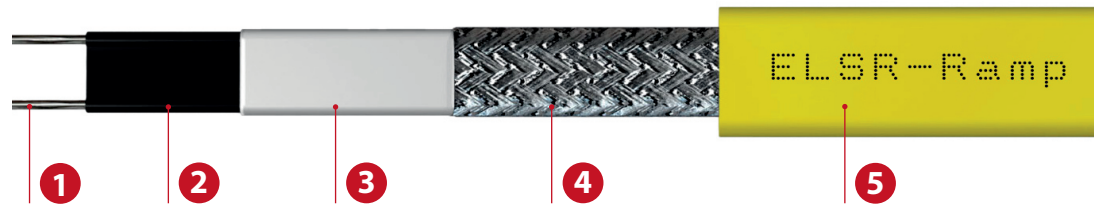
### Approvals



### Note

- › Not suited for use in asphalt

# ELSR-Ramp up to 100 °C



1	Bus wire	Nickel plated copper, 2.77 mm <sup>2</sup>
2	Self-regulating heating element	
3	Insulation	
4	Protection	Protective braid (Cu, tin plated)
5	Outer jacket	TPE pressure-grouted with protective braid

## Checklist ELSR-Ramp

### Power Connection & End Termination

ELVB-SRV-Ramp	Connection set, shrink-fit	0911124
EL-ECRA	Silicone termination cap, glued, transparent	09112RA

### Junction Boxes

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

## Technical Information

Max. continuous exposure temperature (power on)	80 °C
Max. intermittent exposure temperature (de-energized)	100 °C (max. 1000 h)
Nominal voltage*	230 V
Min. Bending radius	50 mm
Min. Installation temperature	– 20 °C

### Heating circuit length

Switch on temperature [°C]	Nominal fuse rating [A]	Heating circuit length* <sup>1</sup> [m]
		ELSR-Ramp
-10	10	18.0
	16	28.0
	20	36.0
	25	45.0
	32	55.0

\*<sup>1</sup> Heating circuit lengths on the following conditions

- 230 V nominal voltage
- Delayed action circuit breakers (C-characteristic) with 80 % max. load
- Maximum 10 % line voltage drop on heating cable bus wire
- Power connection to one heater end
- In certain installation situations, the heating circuit length may vary.  
Please contact our engineers.

### Electrical protection

#### Power at start-up

- According to local standards and regulations.
- To determine the installed power with the electrical system designer, the nominal current of the series connected fuse or the current value at the system start-up temperature must be taken into account  
(e.g. 32 A for 55 m ELSR-Ramp (–10 °C).
- Residual current device (RCD) 30 mA required, max. 500 m heating cable per RCD.

#### Remark

- For the use of standard control cabinets, the maximum heating circuit length of 55 m at 32 A per heating circuit must not be exceeded.

## Ordering Information

Type	Nominal output [at 10°C]	WxH approx. [mm]	Weight approx. [g/m]	Article - No.
ELSR-Ramp	50 W/m	17,2 x 9,5	253	B02RAMPO

### Power output at +5°C in concrete

Type	Nominal output	WxH approx. [mm]	Weight approx. [g/m]	Article - No.
ELSR-Ramp	110 W/m	17,2 x 9,5	253	B02RAMPO