

# Self-Regulating Trace Heaters

## Medium Temperature

eltherm's ELSR-WA self-regulating trace heater is designed for heat tracing of vessels, pipes, valves and other uses in medium temperature ranges between approx. 85 to 175 °F (30 to 80 °C). ELSR-WA heaters are frequently used to heat trace process and drain lines in the food processing industry, or to maintain temperatures in hot water supply lines of large commercial buildings. ELSR-WA is approved for use in hazardous locations, making it ideally suited for medium temperature service for various industrial applications.

### Advantages:

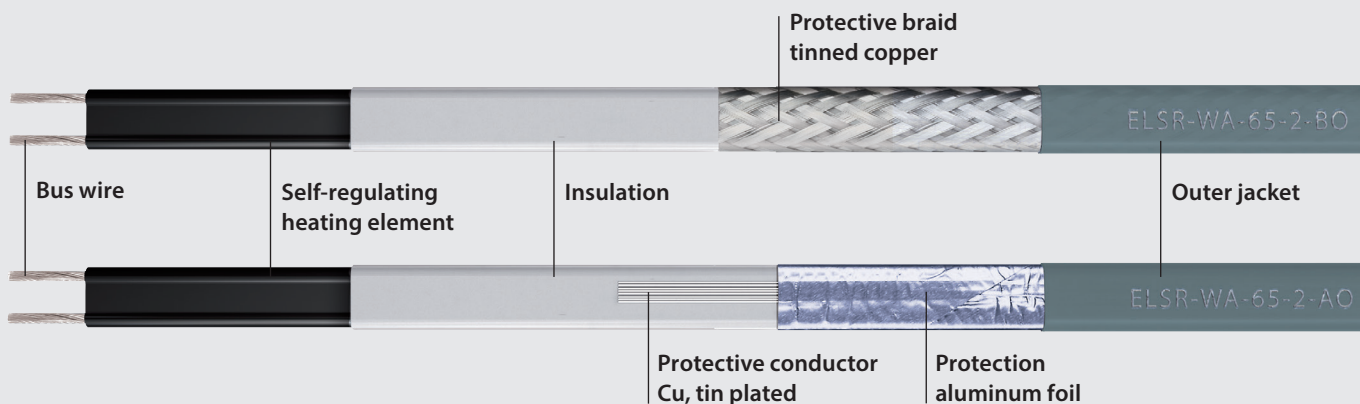
- Self-regulating
- Available in two nominal outputs
- Can be cut to length off the spool
- Water proof

### Applications:

- Food processing industry
- Drain lines in canteens and large-scale kitchens
- Freeze protection of heated lines or pipes
- Installation of hot water supplies



## Type ELSR-WA





## Technical Information

## Type ELSR-WA

### Data

■ Outer jacket	TPE-O
■ Bus wire	Nickel plated copper
■ Minimum start up temperature	-22 °F (-30 °C)
■ Maximum exposure temperature (power off)	194 °F (90 °C)
■ Maximum exposure temperature (power on)	176 °F (80 °C)
■ Nominal voltage	120 VAC (ELSR-WA-XX-1-XX) 240 VAC (ELSR-WA-XX-2-XX)
■ Bending radius, minimum	20 mm (0.79 in)
■ Installation temperature, min.	-49 °F (-45 °C)
■ Classification	Class I Zone 1 AEx / Ex e II T5 Class I Div 2 Group A, B, C, D Class II Div 1 Group E, F, G Class III Div 1
■ Certificates	FM CUS 3050047
■ Standards	IEEE 515, CSA 22.2 130.03
■ Rating	Wet rated, for outdoor use (WS)

### Design

- BO Protective braid and a thermoplastic outer jacket
- AO Aluminum foil and a thermoplastic outer jacket

Type	Nominal output used for water supply lines	Dimensions approx. (mm)	Weight approx. (g/m)	Part No.
ELSR-WA-55-1 AO	3 W/ft at 131 °F (55 °C)	13.4 x 5.8	100	BA200360
ELSR-WA-55-1 BO	3 W/ft at 131 °F (55 °C)	13.6 x 5.6	130	BA200370
ELSR-WA-55-2 AO	3 W/ft at 131 °F (55 °C)	13.4 x 5.8	100	BA200380
ELSR-WA-55-2 BO	3 W/ft at 131 °F (55 °C)	13.6 x 5.6	130	BA200390
ELSR-WA-65-1 AO	4 W/ft at 149 °F (65 °C)	13.4 x 5.8	100	BA200460
ELSR-WA-65-1 BO	4 W/ft at 149 °F (65 °C)	13.6 x 5.6	130	BA200470
ELSR-WA-65-2 AO	4 W/ft at 149 °F (65 °C)	13.4 x 5.8	100	BA200480
ELSR-WA-65-2 BO	4 W/ft at 149 °F (65 °C)	13.6 x 5.6	130	BA200490

Trace Heater	Nominal output 208 V vs. 240 V	Heating circuit length 208 V vs. 240 V
ELSR-WA-XX-2	0.80	1.00

Type	Nominal output used with fat/ oil lines	Dimensions approx. (mm)	Weight approx. (g/m)	Part No.
ELSR-WA-65-2 AO	7 W/ft at 104 °F (40 °C)	13.4 x 5.8	100	BA200480
ELSR-WA-65-2 BO	7 W/ft at 104 °F (40 °C)	13.6 x 5.6	130	BA200490
ELSR-WA-65-1 AO	7 W/ft at 104 °F (40 °C)	13.4 x 5.8	100	BA200460
ELSR-WA-65-1 BO	7 W/ft at 104 °F (40 °C)	13.6 x 5.6	130	BA200470

# Heating Circuit Length

# Type ELSR-WA

## 120 VAC

Start-up temperature	CB capacity (A)	Heating circuit length (ft) for	
		ELSR-WA-55-1	ELSR-WA-65-1
50 °F (10 °C)	10	144	97
	15	219	145
	20	246	194
	25	246	198
	30	246	198
32 °F (0 °C)	10	131	87
	15	197	133
	20	233	176
	25	233	189
	30	233	189
14 °F (-10 °C)	10	118	81
	15	180	121
	20	221	160
	25	221	180
	30	221	180
-22 °F (-30 °C)	10	102	68
	15	153	103
	20	202	139
	25	203	167
	30	203	167

## 240 VAC

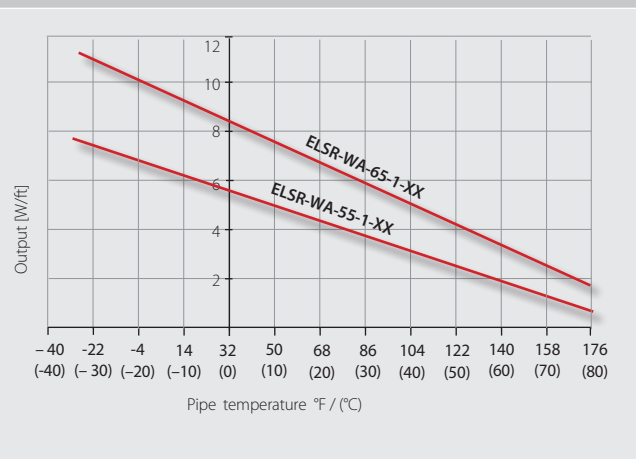
Start-up temperature	CB capacity (A)	Heating circuit length (ft) for	
		ELSR-WA-55-2	ELSR-WA-65-2
50 °F (10 °C)	10	231	149
	15	348	226
	20	430	302
	25	430	348
	30	430	348
	30	430	348
32 °F (0 °C)	10	207	136
	15	312	203
	20	405	272
	25	405	326
	30	405	326
	30	405	326
14 °F (-10 °C)	10	187	123
	15	279	184
	20	372	247
	25	384	310
	30	384	312
	30	384	312
-22 °F (-30 °C)	10	158	105
	15	237	160
	20	315	212
	25	353	263
	30	353	263
	30	353	286

Heating circuit lengths ELSR-WA-XX based on the following conditions:

- Voltage 120VAC (-1) / 240VAC (-2)
- MCB type QO (100% utilisation)
- Voltage drop max. 10%
- Single heater fed from 1 end

### ELSR-WA-XX-1-XX output

(on insulated metallic pipes, in accordance with IEEE 515/CSA 22.2 130-03)



### ELSR-WA-XX-2-XX output

(on insulated metallic pipes, in accordance with IEEE 515/CSA 22.2 130-03)

