



Self-Regulating Trace Heater

Micro-Size

eltherm's ELSR-MA self-regulating trace heater is extremely flexible and designed for installations which require smaller overall cable dimensions and shorter heating circuits. ELSR-MA is designed for freeze protection and all temperature maintain applications to 140 °F (60 °C).

Advantages:

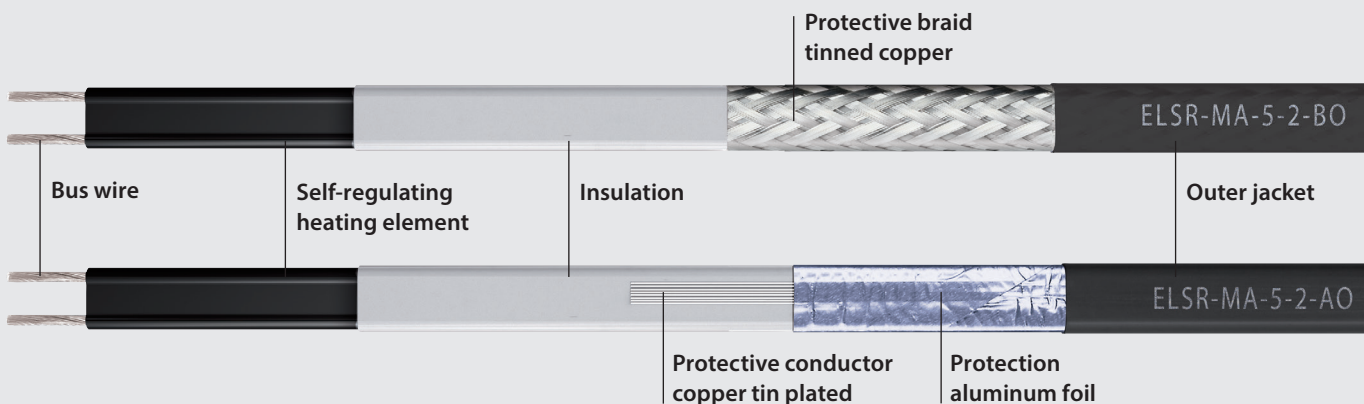
- Self-regulating
- Two nominal outputs
- Cut to length off the spool
- Moisture proof
- UV-resistant
- Small dimensions

Applications:

- Heat tracing of metallic and non-metallic pipes, pumps, vessels and valves
- Food processing industry
- Automotive
- Refrigeration
- Sprinkler systems
- Sewage pipes, intake drain pipes



Type ELSR-MA



Technical Information

Type ELSR-MA

Data

■ Outer jacket	TPE-O
■ Bus wire	Nickel plated copper
■ Minimum start up temperature	-22 °F (-30 °C)
■ Maximum operating temperature de-energized	140 °F (60 °C)
■ Maximum operating temperature energized	140 °F (60 °C)
■ Nominal voltage	120 VAC (ELSR-MA-XX-1-XX) 240 VAC (ELSR-MA-XX-2-XX)
■ Bending radius, minimum	25 mm (1 in)
■ Installation temperature, min.	-49 °F (-45 °C)
■ Standards	IEEE 515, CSA 22.2 130.16
■ Certificates	FM CUS 3050047
■ 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	Dimensions approx. (mm)	Weight approx. (g/m)	Part No.
ELSR-MA-3-1 AO	3 W/ft at 50 °F (10 °C)	7.7 x 6.4	62	BA225110
ELSR-MA-3-1 BO	3 W/ft at 50 °F (10 °C)	8.1 x 5.8	75	BA225120
ELSR-MA-3-2 AO	3 W/ft at 50 °F (10 °C)	7.7 x 6.4	62	BA225130
ELSR-MA-3-2 BO	3 W/ft at 50 °F (10 °C)	8.1 x 5.8	75	BA225140
ELSR-MA-5-1 AO	5 W/ft at 50 °F (10 °C)	7.7 x 6.4	62	BA225210
ELSR-MA-5-1 BO	5 W/ft at 50 °F (10 °C)	8.1 x 5.8	75	BA225220
ELSR-MA-5-2 AO	5 W/ft at 50 °F (10 °C)	7.7 x 6.4	62	BA225230
ELSR-MA-5-2 BO	5 W/ft at 50 °F (10 °C)	8.1 x 5.8	75	BA225240



Heating Circuit Length

Type ELSR-MA

120 VAC

Start-up temperature	CB capacity (A)	Heating circuit length (ft) for	
		ELSR-MA-3-1	ELSR-MA-5-1
50 °F (10 °C)	10	208	132
	15	233	190
	20	233	190
	25	233	190
32 °F (0 °C)	10	170	110
	15	213	174
	20	213	174
	25	213	174
14 °F (-10 °C)	10	146	94
	15	197	150
	20	197	161
	25	197	161
-22 °F (-30 °C)	10	113	73
	15	172	117
	20	172	141
	25	172	141

240 VAC

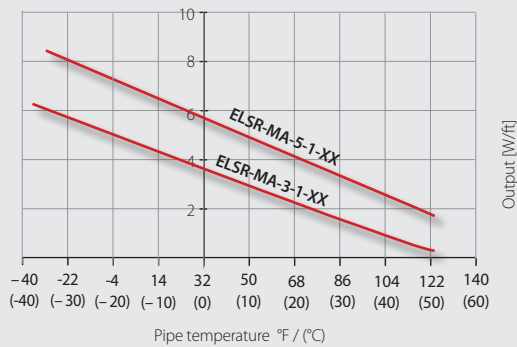
Start-up temperature	CB capacity (A)	Heating circuit length (ft) for	
		ELSR-MA-3-2	ELSR-MA-5-2
50 °F (10 °C)	10	415	320
	15	415	346
	20	415	346
	25	415	346
	25	415	346
32 °F (0 °C)	10	379	273
	15	379	320
	20	379	320
	25	379	320
	25	379	320
14 °F (-10 °C)	10	325	239
	15	349	299
	20	349	299
	25	349	299
	25	349	299
-22 °F (-30 °C)	10	255	190
	15	307	266
	20	307	266
	25	307	266
	25	307	266

Heating circuit lengths ELSR-MA-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-MA-XX-1-XX output

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



ELSR-MA-XX-2-XX output

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

