



At a Glance

Applications



Temperature maintenance



Pipelines



Valves, pumps

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

Benefits

- › Two nominal outputs
- › Water proof & UV-resistant
- › Small dimensions

Designs

- AO** Aluminium foil, TPE-O outer jacket
- BO** Protective braid, TPE-O outer jacket

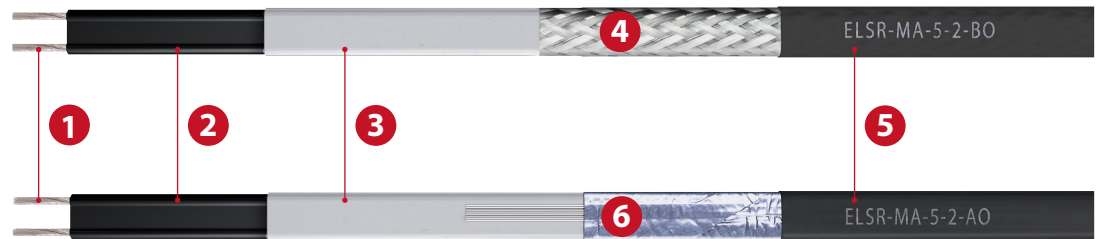
Approvals



- › Certification
FM 16 NUS 0014
- › Standards
IEEE 515, CSA 22.2 130.16

ELSR-MA

up to 140 °F (60 °C)



1	Bus wire	Nickel plated copper, 20 AWG (0.63 mm ²)
2	Self-regulating heating element	
3	Insulation	
4	Protection	Protective braid (Cu, tin plated)
5	Outer jacket	TPE-O
6	Protective conductor connection	see 4 or Cu, tin plated with aluminium foil

Checklist

Power Connection & End Termination

ELVB-SRAM-3/4" ST	Power Connection Kit ELSR-MA, -MA-BF with steel/zinc cable gland/fitting, 3/4" NPT (non-hazardous location) ^②	09CA013
ELVB-SRAM	Power Connection kit ELSR-MA without gland	09CA052
EL-ECM	End Termination Kit for ELSR-MA ^{①②}	09CA041

^①min. installation temperature -49 °F (-45 °C)

^②coverage: braiding 80 %, aluminum foil 100 %

Technical Information

Min. start up temperature	-22 °F (-30 °C)
Max. continuous exposure temperature (power on)	140 °F (60 °C)
Max. intermittent exposure temperature (de-energized)	140°F (60 °C)
Nominal voltage	120 VAC (ELSR-MA-XX-1-XX) / 240 VAC (ELSR-MA-XX-2-XX)
Min. Bending radius	1.0 in (25 mm)
Min. Installation temperature	-49 °F (- 45 °C)
Rating	Wet rated, for outdoor use (WS)

Heating Circuit Length

120 VAC

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

Heating circuit lengths on the following conditions

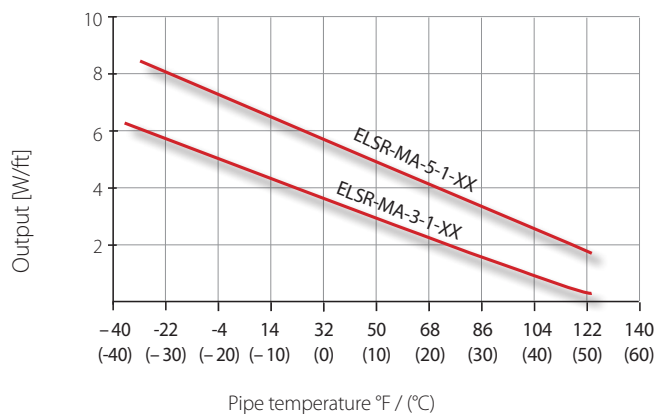
- Voltage 120 VAC (-1-) / 240 VAC (-2-)
- Voltage drop max. 10%
- MCB type QO (100% utilisation)
- Single heater fed from 1 end

Power Output

120 VAC

ELSR-MA-XX-1-XX output

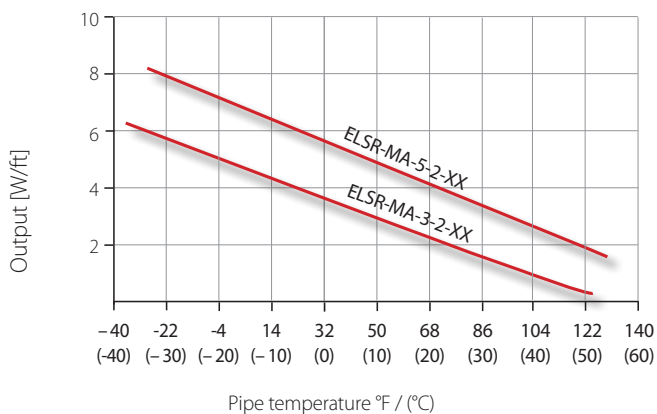
(on insulated metallic pipes, in accordance with IEEE 515/CSA 22.2 130-03)



240 VAC

ELSR-MA-XX-2-XX output

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



Ordering Information

120 VAC

Type	Nominal output [at 50°F (10 °C)]	WxH approx. [mm]	Weight approx. [g/m]	Article - No.
ELSR-MA-3-1-AO	3 W/ft	7.7 x 6.4	62	BA225110
ELSR-MA-3-1-BO	3 W/ft	8.1 x 5.8	75	BA225120
ELSR-MA-5-1-AO	5 W/ft	7.7 x 6.4	62	BA225210
ELSR-MA-5-1-BO	5 W/ft	8.1 x 5.8	75	BA225220

240 VAC

Type	Nominal output [at 50°F (10 °C)]	WxH approx. [mm]	Weight approx. [g/m]	Article - No.
ELSR-MA-3-2-AO	3 W/ft	7.7 x 6.4	62	BA225130
ELSR-MA-3-2-BO	3 W/ft	8.1 x 5.8	75	BA225140
ELSR-MA-5-2-AO	5 W/ft	7.7 x 6.4	62	BA225230
ELSR-MA-5-2-BO	5 W/ft	8.1 x 5.8	75	BA225240