OSR Self-Regulating Heating Cable ELSR-MA

eltherm® innovations in heat tracing

ELSR-MA-BF

Features

Outer jacket
- Thermoplastic (AO, BO), Fluoropolymer (BF).

Bus wire
- Nickel plated copper.

Minimum start-up temperature
- -30 °C (-22 °F).

Maximum operating temperature (power off)
- 60 °C (140 °F).

Maximum operating temperature (power on)
- 60 °C (140 °F).

Nominal voltage
- 120V (ELSR-MA-XX-1-XX).
- 240V (ELSR-MA-XX-2-XX).

Bending radius, minimum
- 25 mm (1 in.).

Installation temperature, minimum
- AO, BO: -45 °C (-49 °F).
- BF: -25 °C (-13 °F).

Standards
- IEEE 515, CSA 22.2 130.03.

Certification
- FM CUS 3050047.

Rating
- Wet rated, for outdoor use (WS) (AO, BO).
- PS (2000 kPa/290 psi) (BF).

Warranty
- 1-year warranty on the heating cable.

Application
- Heat tracing of metallic and non-metallic pipes, pumps, vessels and valves, food processing industry, automotive, refrigeration, sprinkler systems, sewage pipes, intake drain pipes, potable water line (BF).

Models

Nominal Output W/ft.	Product #[1] 120V	Product #[1,2] 240V	Outer jacket/Mechanical shield AO	BO	BF	Cable dimension approx. (mm)
3	ELSR-MA-3-1-XX	-	✓	✓	✓	7.7 x 6.4
3	-	ELSR-MA-3-2-XX	✓	✓	✓	8.1 x 5.8
5	ELSR-MA-5-1-XX	-	✓	✓	-	7.7 x 6.4
5	-	ELSR-MA-5-2-XX	✓	✓	-	8.1 x 5.8

[1] *XX = Outer jacket/Mechanical shield.*
AO Aluminum foil and a thermoplastic outer jacket.
BO Protective braid and a thermoplastic outer jacket.
BF Protective braid and food-safe outer jacket, suitable for use in potable water (certified according to NSF/ANSI 61).
[2] *For operations at 208V, please consult Correction Factors/Multipliers at page 46.*
Spool size: standard 500 ft. (153 m) or 1000 ft. (306 m).

Cut to Desired Length Service Offered

When ordering, the quantity on purchase order is equal to the length in feet of cable required. Minimal order of 25 ft.
Ex.: To order a full spool (500 ft.), write 500 for quantity. For smaller lengths, for example, to order 25 ft., write 25 for quantity.

Options

ELSR-MA
End termination recommended : EL-ECM.
Power connection recommended : ELVB-SRAM-3/4-ST.
ELSR-MA-BF
End termination recommended : EL-ECMF.
Power connection recommended : ELVB-SRAM-3/4-ST.
See the Options at page 46.

Heating Circuit Length Charts and Technical Data

Available at www.ouellet.com.

Options

Product #	Description	Factory Installed	Kit
ELSR-NA Models			
EL-ECN-EX[1,2]	End termination for ELSR-NA	-	✓
ELVB-SRAN	Power connection without cable gland	-	✓
ELVB-SRAN-3/4-ST[2]	Power connection with steel/zinc cable gland/fitting, 3/4" NPT, non-hazardous location	-	✓
ELSR-MA Models			
EL-ECM[1,2]	End termination for ELSR-MA	-	✓
ELVB-SRAM-3/4-ST [2]	Power connection with steel/zinc cable gland/fitting, 3/4" NPT, non-hazardous location	-	✓
ELSR-MA-BF Models			
EL-ECMF[3]	End termination for ELSR-MA-BF	-	✓
ELVB-SRAM-3/4-ST [2]	Power connection with steel/zinc cable gland/fitting, 3/4" NPT, non-hazardous location	-	✓
ECA-MABF-PH-11/2	Quick connect plumbing kit for 1 1/2" polyethylene pipes	-	✓
ECA-MABF-PH-1	Quick connect plumbing kit for 1" polyethylene pipes	-	✓
ELSR-WA Models			
EL-ECW[1,2]	End termination for ELSR-WA	-	✓
ELVB-SRAW-3/4-ST	Power connection with steel/zinc cable gland, 3/4" NPT, non-hazardous location	-	✓
ELSR-HA Models			
EL-ECH-EX[1,2]	End termination for ELSR-HA	-	✓
ELVB-SRAH-3/4-ST[2]	Power connection with steel/zinc cable gland/fitting, 3/4" NPT, non-hazardous location	-	✓
ELVB-SREX-3/4-BR-HT[1,2]	Power connection with brass cable gland, 3/4" NPT, hazardous location	-	✓
ELVB-SREX-20-BR-HT[1,2]	Power connection with brass cable gland, M20, hazardous location	-	✓
All ELSR Models			
ECA-JB1-XX [5]	Junction box with power connection and termination for single connection c/w label and fastener	-	✓
ECA-JB2-XX [5]	Junction box with power connection and termination for double connectionc/w label and fastener	-	✓
ECA-TYS6-280	Stainless steel fastener 1/4" x 6" (6.8 mm x 152.4 mm)	-	✓
ECA-TYS9-280	Stainless steel fastener 1/4" x 9" (6.8 mm x 228.6 mm)	-	✓
ECA-TYS12-280	Stainless steel fastener 1/4" x 12" (6.8 mm x 304.8 mm)	-	✓
ECA-TYS18-280	Stainless steel fastener 1/4" x 18" (6.8 mm x 457.2 mm)	-	✓
ECA-TYS24-280	Stainless steel fastener 1/4" x 24" (6.8 mm x 609.6 mm)	-	✓
ECA4160TB	Roof clip, single hole strap 3/4" (Qty 25)	-	✓
EL-WS01F	Warning label/sign, French	-	✓
EL-WS02E	Warning label/sign, English	-	✓
ELB-03	Self-adhesive glass fiber tape, max. temp. = 90 °C (194 °F), 50 m (165 ft.)	-	✓
ELB-06C	Self-adhesive aluminum tape, max. temp. = 80 °C (176 °F), 50 m (165 ft.)	-	✓
ELB-18	Gutter and downspout mounting plate	-	✓
ELB-20	Downspout mounting plate	-	✓
ELB-21	Gutter mounting plate	-	✓
ELB-16-10	Mechanical fastener, plastic strap (L 102 mm x 2.5 mm)	-	✓
ELB-16-20	Mechanical fastener, plastic strap (L 200 mm x 3.6 mm)	-	✓
ELB-16-36	Mechanical fastener, plastic strap (L 360 mm x 4.8 mm)	-	✓
Controller and Sensor Options			
DS-2C[4]	Aerial mounted sensor and controller to detect humidity and temperature, 30A/277VAC, 20A/28VDC	-	-
ETF-744/99	24V outdoor sensor for measuring temperature	-	-
ETO2[4]	Dual-zone electronic controller, 3 X 16A, 120-240V	-	-
ETOR-55	Gutter sensor to detect humidity with 33 ft. (10 m) cable	-	-
ECA-E55-R25HT	NEMA 4X Indoor/outdoor thermostat	-	-
ECA-TM-1S1H1-E5RTDA1	TraceMate™ I GFCI electronic thermostat for single circuit at 120V	-	-
ECA-TM-1D1H2-E5RTDA1	TraceMate™ I GFCI electronic thermostat for single circuit at 208/240V	-	-
ECA-TM-2S1H1-E5-RTD	TraceMate™ II GFCI electronic thermostat for dual circuit at 120V	-	-
ECA-TM-2S1H2-E5-RTD	TraceMate™ II GFCI electronic thermostat for dual circuit at 208/240V	-	-

[1] Minimum installation temperature -45 °C (-49 °F).
[2] Coverage: braiding 80%, aluminum foil 100%.
[3] Minimum installation temperature -13 °C (-25 °F).
[4] Requires a ground fault circuit interrupter (GFCI) in the electrical panel.
[5] XX = NA or HA.

Eltherm® Correction Factors/Multipliers for Operation of Heating Cables in 208V

To calculate the corrected power output for operation in 208V, multiply the published output at 240V (in W/ft.) by the nominal output factor provided for the applicable heating cable type.

To calculate maximum heating circuit lengths for operation in 208V (tables provided in product data sheets), multiply the published max. heating circuit length at 240V provided for the applicable heating cable type.

Heating Cable Correction Factors/ Multipliers	Nominal Output 208V vs. 240V	Heating Circuit Length 208V vs. 240V
ELSR-HA		
ELSR-HA-XX-2	0.74	1.00
ELSR-NA		
ELSR-NA-XX-2	0.88	0.93
ELSR-MA		
ELSR-MA-XX-2	0.82	1.00
ELSR-WA		
ELSR-WA-XX-2	0.80	1.00