

OSR-NA All Purpose Self-Regulating Heating Cable ELSR-NA



Features

Outer jacket

- Thermoplastic (AO, BO), Fluoropolymer (BOT).

Bus wire

- Nickel plated copper.

Minimum start-up temperature

- -30 °C (-22 °F).

Maximum operating temperature (power on)

- 60 °C (140 °F).

Maximum operating temperature (power off)

- 80 °C (176 °F).

Nominal voltage

- 120V, 240/208V.

Bending radius, minimum

- 25 mm (1 in.).

Installation temperature, minimum

- AO, BO: -45 °C (-45 °F).
- BF: -25 °C (-13 °F).

Classification

- II 2G Ex e IIC T6 Gb II 2D Ex tb IIIC.
- T 80 °C Db.
- Class I, Division 2, Groups A, B, C, D.

- Class II, Division 2, Groups E, F, G.
- Class III, T6.
- Class I, Zone 1, AEx / Exe II, T6.
- Class 1, Division 1, Groups B, C, D (Contact manufacturer).

Standards

- CSA C22.2.130.03; -WS.
- CAN/CSA 60079-7:12, 60079-0-11.
- ANSI/IEEE 515, 515.

Certification

- IECEx EPS 12.0006U.
- 12ATEX1431U.
- CSA C US 2547790.

Rating

- Wet rated, for outdoor use (WS).

Warranty

- 1-year basic warranty on the heating cable.
- 10-year limited warranty available.

Application

- Freeze protection, heat tracing instrumentation, pipes, vessel and tanks, chemical and petrochemical industries, food processing, automotive, roof and gutter, sprinkler systems.

Models

Nominal Output W/ft.	Product # ¹ 120V	Nominal Output W/ft.	Product # ^{1,2} 240V	AO	Outer jacket/Mechanical shield			Cable dimension approx. (mm)
					Price	BO	Price	
1000 ft. spool		1000 ft. spool						
3	ELSR-NA-3-1-XX-10	4	ELSR-NA-4-2-XX-10	✓			✓	13.8 x 5.6
5	ELSR-NA-5-1-XX-10	6	ELSR-NA-6-2-XX-10	✓			✓	13.8 x 5.6
7	ELSR-NA-7-1-XX-10	8	ELSR-NA-8-2-XX-10	✓			✓	14.1 x 5.6
-	-	10	ELSR-NA-10-2-XX-10	✓			✓	14.1 x 5.6
500 ft. spool		500 ft. spool						
3	ELSR-NA-3-1-XX-05	4	ELSR-NA-4-2-XX-05	✓			✓	13.8 x 5.6
5	ELSR-NA-5-1-XX-05	6	ELSR-NA-6-2-XX-05	✓			✓	13.8 x 5.6
7	ELSR-NA-7-1-XX-05	8	ELSR-NA-8-2-XX-05	✓			✓	14.1 x 5.6
-	-	10	ELSR-NA-10-2-XX-05	✓			✓	14.1 x 5.6
Cut to length³		Cut to length³						
3	ELSR-NA-3-1-XX	4	ELSR-NA-4-2-XX	✓			✓	13.8 x 5.6
5	ELSR-NA-5-1-XX	6	ELSR-NA-6-2-XX	✓			✓	13.8 x 5.6
7	ELSR-NA-7-1-XX	8	ELSR-NA-8-2-XX	✓			✓	14.1 x 5.6
-	-	10	ELSR-NA-10-2-XX	✓			✓	14.1 x 5.6

¹ XX = Outer jacket/Mechanical shield.

AO Aluminum foil and a thermoplastic outer jacket.

BO Protective braid and a thermoplastic outer jacket.

BOT Protective braid and a fluoropolymer outer jacket.

² For operations at 208V, please consult Correction Factors/Multipliers at next page.

³ Cut to length service, 25 ft. minimum. When ordering, the quantity on the purchase order is equal to the length in feet of cable required.

E.g.: To order 35 ft., write 35 for quantity with cut to length product code.

Options

See OSR Options and Controls section

Heating circuit length for ELSR-NA models

Start-up temperature	120V			
	CB capacity (A)	Maximum heating circuit (ft.) for		
		ELSR-NA-3-1	ELSR-NA-5-1	ELSR-NA-7-1
10 °C (50 °F)	10	159	125	82
	15	238	187	123
	20	317	249	164
	25	397	312	205
	30	476	374	246
	35	555	436	287
0 °C (32 °F)	40	612	499	328
	10	143	112	75
	15	215	168	113
	20	287	224	151
	25	358	280	188
	30	430	336	226
-10 °C (14 °F)	35	502	392	264
	40	573	448	301
	10	130	102	69
	15	195	153	104
	20	260	204	139
	25	325	255	173
-30 °C (-22 °F)	30	390	306	208
	35	455	357	243
	40	520	408	277
	10	110	87	60
	15	165	130	90
	20	220	173	120
	25	275	217	150
	30	330	260	180
	35	385	303	210
	40	440	347	240

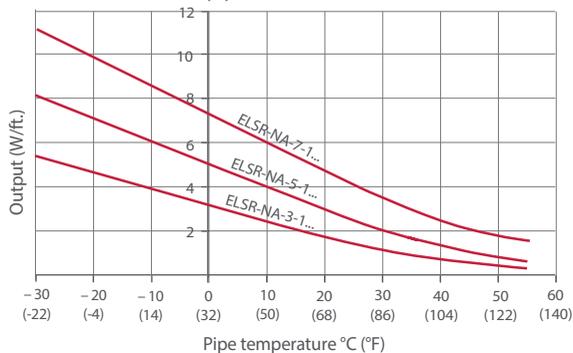
Start-up temperature	240V				
	CB capacity (A)	Maximum heating circuit (ft.) for			
		ELSR-NA-4-2	ELSR-NA-6-2	ELSR-NA-8-2	ELSR-NA-10-2
10 °C (50 °F)	10	273	170	127	66
	15	410	255	191	99
	20	547	340	255	132
	25	683	425	318	165
	30	820	510	382	198
	35	957	595	446	231
0 °C (32 °F)	40	1087	687	509	264
	10	245	154	117	61
	15	367	231	175	91
	20	489	308	233	121
	25	612	385	292	152
	30	734	462	350	182
-10 °C (14 °F)	35	856	539	408	212
	40	979	616	467	243
	10	222	141	108	57
	15	333	211	162	85
	20	444	281	216	113
	25	555	352	270	142
-30 °C (-22 °F)	30	666	422	324	170
	35	777	492	378	198
	40	888	563	432	227
	10	187	120	93	50
	15	280	180	140	75
	20	373	240	187	100
	25	467	300	233	125
	30	560	360	280	150
	35	653	420	327	175
	40	747	480	373	200

Maximum heating circuit ELSR-NA-XX on the following conditions:

- 120/240 Voltage
- Voltage drop max. 10%
- MCB type QO (100% utilization)
- Single cable fed 1 end

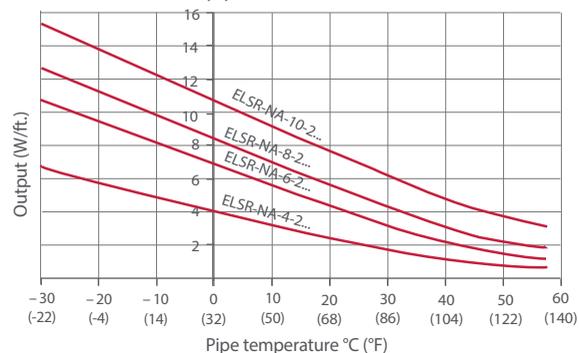
ELSR-NA-XX-1-XX output

(on insulated metallic pipes)



ELSR-NA-XX-2-XX output

(on insulated metallic pipes)



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-NA-XX-2	0.88	0.93

Recommended cable type and output

- In Snow and Ice (120V cable)**
 - 11W/ft. @ 50 °F (36W/m @ 10 °C)
- In Dry Air**
 - 7W/ft. @ 50 °F (23W/m @ 10 °C)
- In Snow and Ice (240/208V cable)**
 - 13W/ft. @ 50 °F (42W/m @ 10 °C)
- In Dry Air**
 - 8W/ft. @ 50 °F (26W/m @ 10 °C)

Options

Product # Kit	Description
OSR-NA Series	
ECA-JB1-NA	Junction box with power connection and termination for single connection c/w label and fastener
ECA-JB2-NA	Junction box with power connection and termination for double connection c/w label and fastener
EL-CLIC-P	Quick connector with supply lead, for 1 to 3 cables
EL-CLIC-S	Quick connector for direct connection or cold lead connection of 1 to 3 cables
EL-ECN-EX ¹	End termination for ELSR-NA
EL-SPN-16	Heat shrink splice-kit suitable for ELSR-NA and cold lead connections
ELVB-SRAN	Power connection without cable gland
ELVB-SRAN-34-ST	Power connection with steel/zinc cable gland/fitting, 3/4" NPT, non-hazardous location
ELVB-SREX-34-HT ¹	Power connection with nickel plated cable gland, 3/4" NPT, hazardous location
ELVB-SREX-M20-HT ¹	Power connection with nickel plated cable gland, M20, hazardous location
KIT-OSR-ELSR-KIT-NA	End and power termination kit with warning sticker NA Series
OSR-MA Series (AO and BO outer jacket)	
EL-ECM ¹	End termination for ELSR-MA
ELVB-SRAM	Power connection without cable gland
ELVB-SRAM-34-ST	Power connection with steel/zinc cable gland/fitting, 3/4" NPT, non-hazardous location
KIT-OSR-ELSR-KIT-MA	End and power termination kit with warning sticker MA Series
OSR-MA Series (BF outer jacket)	
EL-ECMF ²	End termination for ELSR-MA-BF
ELVB-SRAM-34-ST	Power connection with steel/zinc cable gland/fitting, 3/4" NPT, non-hazardous location
KIT-OSR-ECA-MABF-PH-FIT	Brass gland cable fitting 3/4" NPT non-hazardous location for MA-BF cable
KIT-OSR-ELSR-KIT-MA-BF	End and power termination kit with warning sticker BF Series
KIT-OSR-MABF-PH-1-CTSOD ³	Quick connect plumbing kit for 1" OD polyethylene CTS pipes for MA-BF cable
KIT-OSR-MABF-PH-114-CTSOD ³	Quick connect plumbing kit for 1 1/4" OD polyethylene CTS pipes for MA-BF cable
KIT-OSR-MABF-PH-112-CTSOD ³	Quick connect plumbing kit for 1 1/2" OD polyethylene CTS pipes for MA-BF cable
KIT-OSR-MABF-PH-34-ID ³	Quick connect plumbing kit for 3/4" ID polyethylene pipes for MA-BF cable
KIT-OSR-MABF-PH-1-ID ³	Quick connect plumbing kit for 1" ID polyethylene pipes for MA-BF cable
KIT-OSR-MABF-PH-114-ID ³	Quick connect plumbing kit for 1 1/4" ID polyethylene pipes for MA-BF cable
KIT-OSR-MABF-PH-112-ID ³	Quick connect plumbing kit for 1 1/2" ID polyethylene pipes for MA-BF cable
OSR-WA Series	
EL-CLIC-P	Quick connector with supply lead, for 1 to 3 cables
EL-CLIC-S	Quick connector for direct connection or cold lead connection of 1 to 3 cables
EL-ECW ¹	End termination for ELSR-WA
ELVB-SRAW	Power connection without cable gland
ELVB-SRAW-34-ST	Power connection with steel/zinc cable gland, 3/4" NPT, non-hazardous location
KIT-OSR-ELSR-KIT-WA	End and power termination kit with warning sticker WA Series
OSR-HA Series	
ECA-JB1-HA	Junction box with power connection and termination for single connection c/w label and fastener
ECA-JB2-HA	Junction box with power connection and termination for double connection c/w label and fastener
EL-ECH-EX ¹	End termination for ELSR-HA
ELVB-SRAH	Power connection without cable gland
ELVB-SRAH-34-ST	Power connection with steel/zinc cable gland/fitting, 3/4" NPT, non-hazardous location
ELVB-SREX-34-HT ¹	Power connection with nickel plated cable gland, 3/4" NPT, hazardous location
ELVB-SREX-M20-HT ¹	Power connection with nickel plated cable gland, M20, hazardous location
KIT-OSR-ELSR-KIT-HA	End and power termination kit with warning sticker HA Series
All OSR Series	
Multiple applications	
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)
KIT-OSR-EL-WS03	Warning label/sign bilingual (English / French)
Roof and gutter	
ELB-18	Gutter and downspout mounting plate
ELB-21	Gutter mounting plate
ELB-RCLIP	Roof clips for cable, qty 25
Pipe tracing	
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.)



EL-EC(x)



ELVB-SRA(x)



ELVB-SRA(x)-34-ST



KIT-OSR-ELSR-KIT-(xx)



KIT-OSR-MABF-PH-(xx)-CTSOD



KIT-OSR-MABF-PH-(xx)-ID



ECA-JB1

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

² Minimum installation temperature -13 °C (-25 °F).

³ Identifying the type of pipe is key to ensuring a simple and effective connection, Ouellet Canada is not responsible for incorrect pipe selection. No returns will be accepted.

Controls

Product #	Price	Description
Controller options for roof and gutter for de-icing		
DS-2C ¹		Aerial mounted controller with sensor to detect humidity and temperature, 30A, 100V to 277V
DS-8C ¹		Aerial mounted controller with sensor to detect temperature and a sensor to detect humidity with 10 ft. (3 m) cable, 30A, 100V to 277V
DS-9C ¹		Aerial mounted controller with sensor to detect temperature and a sensor to detect humidity with 10 ft. (3 m) cable, 2 X 30A, 100V to 277V
EX-50		50 ft. (15 m) extension kit, with connection fittings for humidity sensor
CDP-2		Interior controller and display for DS products
ETO2 ¹		Dual-zone electronic controller, 3 X 16A, 120V to 240V
ETF-744-99		24V outdoor sensor for measuring temperature
ETOR-55		Gutter sensor to detect humidity with 33 ft. (10 m) cable
Controller options for pipe tracing for use in non-hazardous (ordinary) locations		
ECA-E55-R25HT ¹		SPDT, NEMA 4X thermostat in molded aluminum housing, 22A at 120/250/480V, with 10 ft. (3 m) stainless steel bulb and capillary
TPR-L1N-3X-Q10 ¹		SPDT, NEMA 4X thermostat in polycarbonate housing, 22A at 120/250/480V, with 3 ft. (1 m) tinned copper bulb and capillary
TPR-L1N-10X-Q10 ¹		SPDT, NEMA 4X thermostat in polycarbonate housing, 22A at 120/250/480V, with 10 ft. (3 m) tinned copper bulb and capillary
TRF115-005 ¹		SPDT, NEMA 4X thermostat, range -17 °C to 49 °C (0 °F to 120 °F), 25A at 120/208/240/277V, with 5 ft. (1.5 m) stainless bulb and capillary
TRF115-007 ¹		SPDT, NEMA 4X thermostat, range -35 °C to 38 °C (-30 °F to 100 °F), 25A at 120/208/240/277V, with 8 ft. (2.4 m) copper bulb and capillary
ELTC-14-RTD ¹		Digital temperature control 20A at 90-260V, including 3-wire RTD (Pt-100) sensing element is 5 x 50 mm with 5 m of fluoropolymer lead wires, range 0 to 250°C
Controller options for pipe tracing for use in non-hazardous (ordinary) and hazardous locations		
TXR-L2S-10-Q10 ¹		SPDT, explosion-proof, NEMA 4, 7 and 9 thermostat, in anodized aluminum housing, 22A at 120/250/480V, with 10 ft. (3 m) stainless steel bulb and capillary
TM-1SIH1-E5-RTD-A1		TraceMate™ I GFCI electronic thermostat for single circuit at 120V
TM-1DIH2-E5-RTD-A1		TraceMate™ I GFCI electronic thermostat for single circuit at 240/2080V
TM-2SIH1-E5-RTD		TraceMate™ II GFCI electronic thermostat for dual circuit at 120V
TM-2DIH2-E5-RTD		TraceMate™ II GFCI electronic thermostat for dual circuit at 240/2080V
MS-2101		MasterTrace Single circuit electronic GFCI controller with double pole, 120V to 277V, 30A, with user interface
MS-2102		MasterTrace Double circuit electronic GFCI controller with single pole, 120V only, 30A, with user interface
Control panel options		
OSR-4-240		240V GFCI control panel with 2 x 4-pole contactors and transformer 240-120V
OSR-6-240		240V GFCI control panel with 3 x 4-pole contactors and transformer 240-120V
OSR-8-240		240V GFCI control panel with 4 x 4-pole contactors and transformer 240-120V
OSR-12-240		240V GFCI control panel with 6 x 4-pole contactors and transformer 240-120V ,

Requires a ground fault circuit interrupter (GFCI) in the electrical panel.

