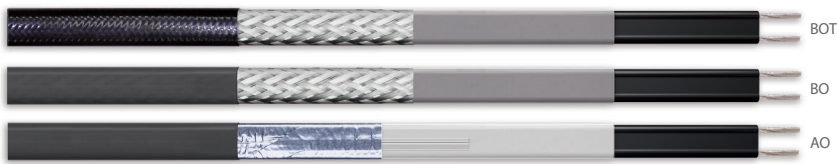


OSR-NA All Purpose Self-Regulating Heating Cable ELSR-NA



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).
- BOT: -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.

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 # ^{1,3} | Outer jacket/Mechanical shield | | | Nominal Output W/ft. | Product # ^{1,2,3} | Outer jacket/Mechanical shield | | | Cable dimension approx. (mm) | |
|----------------------|--------------------------|--------------------------------|----|-----|----------------------|----------------------------|--------------------------------|----|-----|------------------------------|------------|
| | | AO | BO | BOT | | | AO | BO | BOT | | |
| 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 |

Custom Cut⁴

| Product # | Description |
|-----------|--|
| OSR-CUT | Cutting fee for all lengths other than 500 ft. and 1000 ft. (25 ft. minimum) |

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 When ordering, the quantity on the purchase order is equal to the length in feet of the cable required.

E.g.: To order a 500 ft., cable, write 500 for quantity with product code.

⁴ Custom cutting service available with cutting fee (OSR-CUT) for all lengths other than 500 ft. and 1000 ft. (minimum of 25 ft.).

E.g.: To order a 75 ft., cable, write 75 for quantity with product code and add the product code OSR-CUT on another line.

Options

See OSR Options and Controls section

Heating circuit length for ELSR-NA models

| Start-up temperature | CB capacity (A) | 120V | | |
|----------------------|-----------------|-----------------------------------|-------------|-------------|
| | | 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) | 10 | 143 | 112 | 75 |
| | 15 | 215 | 168 | 113 |
| | 20 | 287 | 224 | 151 |
| | 25 | 358 | 280 | 188 |
| | 30 | 430 | 336 | 226 |
| | 35 | 502 | 392 | 264 |
| -10 °C (14 °F) | 10 | 130 | 102 | 69 |
| | 15 | 195 | 153 | 104 |
| | 20 | 260 | 204 | 139 |
| | 25 | 325 | 255 | 173 |
| | 30 | 390 | 306 | 208 |
| | 35 | 455 | 357 | 243 |
| -30 °C (-22 °F) | 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 | |

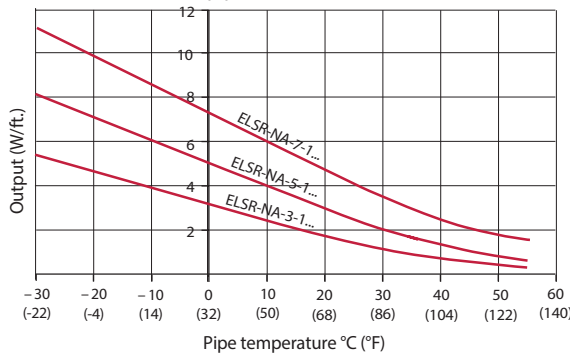
| Start-up temperature | CB capacity (A) | 240V | | | |
|----------------------|-----------------|-----------------------------------|-------------|-------------|--------------|
| | | Maximum heating circuit (ft.) for | | | |
| | | ELSR-NA-4-2 | ELSR-NA-6-2 | ELSR-NA-8-2 | ELSR-NA-10-2 |
| 10 °C (50 °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) | 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 |
| | 35 | 856 | 539 | 408 | 212 |
| -10 °C (14 °F) | 10 | 222 | 141 | 108 | 57 |
| | 15 | 333 | 211 | 162 | 85 |
| | 20 | 444 | 281 | 216 | 113 |
| | 25 | 555 | 352 | 270 | 142 |
| | 30 | 666 | 422 | 324 | 170 |
| | 35 | 777 | 492 | 378 | 198 |
| -30 °C (-22 °F) | 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

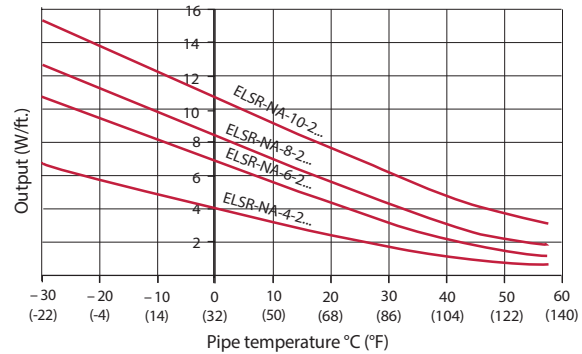
ELSR-NA-XX-1-XX output

(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 |

Cable heat output depending on the environment

- 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)

OSR

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 |
| ELAK-3-7 | Junction box with mounting stand for non-hazardous (ordinary) and hazardous locations |
| ECA-LSTK | Power connection and lighted termination kit |
| ELVB-SRAN | Power connection without cable gland |
| ELVB-SRAN-12-PA | Power connection with plastique/PA12 cable gland/fitting, 1/2" NPT, non-hazardous location |
| ELVB-SRAN-34-PA | Power connection with plastique/PA12 cable gland/fitting, 3/4" NPT, non-hazardous location |
| 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-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-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-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-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 |
| ELAK-3-7 | Junction box with mounting stand for non-hazardous (ordinary) and hazardous locations |
| ECA-LSTK | Power connection and lighted termination kit |
| 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-HA | End and power termination kit with warning sticker HA Series |

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.



EL-EC(x)



ECA-LSTK



ELVB-SRA(x)



ELVB-SRA(x)-34-ST



KIT-OSR-ELSR-xx



KIT-OSR-MABF-PH-xx-CTSOD



KIT-OSR-MABF-PH-xx-ID



ECA-JB1-xx