



Certificate of Compliance

Certificate: 2547790

Master Contract: 256470

Project: 80115756

Date Issued: 2023-10-31

Issued To: Eltherm Production GmbH
Ernst-Heinkel-Str. 6-10
Burbach, North Rhine-Westphalia, 57299
Germany

Attention: Peter Schmidt

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.



Issued by: Ethan Poopalasingam
Ethan Poopalasingam

PRODUCTS

CLASS – 2872 01 - HEATERS Cable and Cable Sets

CLASS - 2872 81 - HEATERS Cable and Cable Sets - Certified to US Standards

Ordinary Locations:

Self-Regulating heating cable systems, Type ELSR, for pipe & vessel tracing, usages G, WS in Canada, rated 3W/ft to 20W/ft (at reference temperature tabled below), 120Vac or 240Vac.

Self-Regulating heating cable systems, Type ELSR-HA, for pipe & vessel tracing, usages GS in Canada, rated 3W/ft to 20W/ft (at reference temperature tabled below), up to 277Vac.



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CLASS 2878 01 - HEATERS - Cable and Cable Sets - For Hazardous Locations

Class I Zone 1 Ex eb IIC Gb

Self-Regulating heating cable systems, Type ELSR, for pipe & vessel tracing, usages G, WS in Canada, rated 3W/ft to 20W/ft (at reference temperature tabled below), 120Vac or 240Vac, with Termination Kits: Power Termination Kits, ELVB-SREx, ELVB-SRAN, ELVB-SRAH and End Termination Kits EL-ECH and EL-ECN. With stand-off Ex-It for separate junction box.

Class I, Div. 2, Groups A, B, C, D; Class II, Div. 2, Groups E, F, G; Class III;

Self-Regulating heating cable systems, Type ELSR, for pipe & vessel tracing, usages G, WS in Canada, rated 3W/ft to 20W/ft (at reference temperature tabled below), 120Vac or 240Vac, with Termination Kits: Power Termination Kits ELVB-SREx, ELVB-SRAN, ELVB-SRAH and End Termination Kits EL-ECH and EL-ECN.

Class I, Div. 1 & 2, Groups B*, C, D; Class II, Div. 1 & 2, Groups E, F, G; Class III;

Self-Regulating heating cable systems, Type ELSR, for pipe & vessel tracing, usages G, WS in Canada, rated 3W/ft to 20W/ft (at reference temperature tabled below), 120Vac or 240Vac, with Termination Kit EL-HAZELECT (* not included when enclosure GECTT is being used).

CLASS 2878-81 - HEATERS-Cable and Cable Sets - For Hazardous Locations-Certified to U.S. Standards

Class I Zone 1 AEx eb IIC Gb

Self-Regulating heating cable systems, Type ELSR, for pipe & vessel tracing, usages G, WS in Canada, rated 3W/ft to 20W/ft (at reference temperature tabled below), 120Vac or 240Vac, with Termination Kits: Power Termination Kits, ELVB-SREx, ELVB-SRAN, ELVB-SRAH and End Termination Kits EL-ECH and EL-ECN. With stand-off Ex-It for separate junction box.

Class I, Div. 2, Groups A, B, C, D; Class II, Div. 2, Groups E, F, G; Class III;

Self-Regulating heating cable systems, Type ELSR, for pipe & vessel tracing, usages G, WS in Canada, rated 3W/ft to 20W/ft (at reference temperature tabled below), 120Vac or 240Vac, with Termination Kits: Power Termination Kits ELVB-SREx, ELVB-SRAN, ELVB-SRAH and End Termination Kits EL-ECH and EL-ECN.



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ELSR Heating Cables:

Cat. Designation	Power Output (W/ft)	Max. V ac	Min. Install. Temp.	Shield type / Jacket	max. continuous operating temperature	max. continuous exposure temperature
ELSR-NA-3-1 AO	3@5°C /41°F	120	-45°C	aluminium foil / PP	60°C / 140°F	80°C / 176°F
ELSR-NA-3-1 BO	3@5°C /41°F	120	-45C	braid / PP	60°C / 140°F	80°C / 176°F
ELSR-NA-3-1 BOT	3@5°C /41°F	120	-25C	braid / PVDF	60°C / 140°F	80°C / 176°F
ELSR-NA-3-1 BOT	3@5°C /41°F	120	-45C	braid / ECTFE	60°C / 140°F	80°C / 176°F
ELSR-NA-5-1 AO	5@5°C /41°F	120	-45C	aluminium foil / PP	60°C / 140°F	80°C / 176°F
ELSR-NA-5-1 BO	5@5°C /41°F	120	-45C	braid / PP	60°C / 140°F	80°C / 176°F
ELSR-NA-5-1 BOT	5@5°C /41°F	120	-25C	braid / PVDF	60°C / 140°F	80°C / 176°F
ELSR-NA-5-1 BOT	5@5°C /41°F	120	-45C	braid / ECTFE	60°C / 140°F	80°C / 176°F
ELSR-NA-7-1 AO	7@5°C /41°F	120	-45C	aluminium foil / PP	60°C / 140°F	80°C / 176°F
ELSR-NA-7-1 BO	7@5°C /41°F	120	-45C	braid / PP	60°C / 140°F	80°C / 176°F
ELSR-NA-7-1 BOT	7@5°C /41°F	120	-25C	braid / PVDF	60°C / 140°F	80°C / 176°F
ELSR-NA-7-1 BOT	7@5°C /41°F	120	-45C	braid / ECTFE	60°C / 140°F	80°C / 176°F
ELSR-NA-4-2 AO	4@5°C /41°F	240	-45C	aluminium foil / PP	60°C / 140°F	80°C / 176°F
ELSR-NA-4-2 BO	4@5°C /41°F	240	-45C	braid / PP	60°C / 140°F	80°C / 176°F
ELSR-NA-4-2 BOT	4@5°C /41°F	240	-25C	braid / PVDF	60°C / 140°F	80°C / 176°F
ELSR-NA-4-2 BOT	4@5°C /41°F	240	-45C	braid / ECTFE	60°C / 140°F	80°C / 176°F
ELSR-NA-6-2 AO	6@5°C /41°F	240	-45C	aluminium foil / PP	60°C / 140°F	80°C / 176°F
ELSR-NA-6-2 BO	6@5°C /41°F	240	-45C	braid / PP	60°C / 140°F	80°C / 176°F
ELSR-NA-6-2 BOT	6@5°C /41°F	240	-25C	braid / PVDF	60°C / 140°F	80°C / 176°F
ELSR-NA-6-2 BOT	6@5°C /41°F	240	-45C	braid / ECTFE	60°C / 140°F	80°C / 176°F
ELSR-NA-8-2 AO	8@5°C /41°F	240	-45C	aluminium foil / PP	60°C / 140°F	80°C / 176°F
ELSR-NA-8-2 BO	8@5°C /41°F	240	-45C	braid / PP	60°C / 140°F	80°C / 176°F
ELSR-NA-8-2 BOT	8@5°C /41°F	240	-25C	braid / PVDF	60°C / 140°F	80°C / 176°F
ELSR-NA-8-2 BOT	8@5°C /41°F	240	-45C	braid / ECTFE	60°C / 140°F	80°C / 176°F
ELSR-NA-10-2 AO	10@5°C /41°F	240	-45C	aluminium foil / PP	60°C / 140°F	80°C / 176°F
ELSR-NA-10-2 BO	10@5°C /41°F	240	-45C	braid / PP	60°C / 140°F	80°C / 176°F
ELSR-NA-10-2BOT	10@5°C /41°F	240	-25C	braid / PVDF	60°C / 140°F	80°C / 176°F
ELSR-NA-10-2BOT	10@5°C /41°F	240	-45C	braid / ECTFE	60°C / 140°F	80°C / 176°F



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Cat. Designation	Power Output (W/ft)	Max. V ac	Min. Install. Temp.	Shield type / Jacket	max. continuous operating temperature	max. continuous exposure temperature
ELSR-HA-3-1 BOT	3@10°C / 50°F	120	-60C	braid / PFA	120°C / 248°F	200°C / 392°F
ELSR-HA-7-1 BOT	7@10°C / 50°F	120	-60C	braid / PFA	120°C / 248°F	200°C / 392°F
ELSR-HA-10-1 BOT	10@10°C / 50°F	120	-60C	braid / PFA	120°C / 248°F	200°C / 392°F
ELSR-HA-15-1 BOT	15@10°C / 50°F	120	-60C	braid / PFA	120°C / 248°F	200°C / 392°F
ELSR-HA-20-1 BOT	20@10°C / 50°F	120	-60C	braid / PFA	120°C / 248°F	200°C / 392°F
ELSR-HA-3-2 BOT	3@10°C / 50°F	240	-60C	braid / PFA	120°C / 248°F	200°C / 392°F
ELSR-HA-7-2 BOT	7@10°C / 50°F	240	-60C	braid / PFA	120°C / 248°F	200°C / 392°F
ELSR-HA-10-2 BOT	10@10°C / 50°F	240	-60C	braid / PFA	120°C / 248°F	200°C / 392°F
ELSR-HA-15-2 BOT	15@10°C / 50°F	240	-60C	braid / PFA	120°C / 248°F	200°C / 392°F
ELSR-HA-20-2 BOT	20@10°C / 50°F	240	-60C	braid / PFA	120°C / 248°F	200°C / 392°F

Heating cables are permitted for use with the following accessories/kits:

Accessories	Ordinary Locations			Hazardous Locations							
	ELSR-HA (-GS)	ELSR-HA (-WS)	ELSR-NA (-WS)	ELSR-HA Ex Zone 1	ELSR-HA Ex Div 2	ELSR-NA Ex Zone 1	ELSR-NA Ex Div 2	ELSR-HA Class I, II, III Div 2	ELSR-NA Class I, II, III Div 2	ELSR-HA Class I, GP B,C,D Class II, GP E,F,G Class III Div. 1 & 2	ELSR-NA-... BOT Class I, GP B*,C,D Class II, GP E,F,G Class III Div. 1 & 2
End Termination Kit EL-ECH-Ex (with Silicone End Cap EL-ECH, red)	-	+	-	+	+	-	-	+	-	-	-
End Termination Kit EL-ECSH	+	-	-	+	+	-	-	+	-	-	-
End Termination Kit EL-ECN-Ex (with Silicone End Cap EL-ECN, transparent)	-	-	+	-	-	+	+	-	+	-	-



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Accessories	Ordinary Locations			Hazardous Locations							
	ELSR- HA (-GS)	ELSR -HA (-WS)	ELSR- NA (-WS)	ELSR- HA Ex Zone 1	ELSR -HA Ex Div 2	ELSR -NA Ex Zone 1	ELSR -NA Ex Div 2	ELSR- HA Class I, II, III Div 2	ELSR- NA Class I, II, III Div 2	ELSR- HA Class I, GP B,C,D Class II, GP E,F,G Class III Div. 1 & 2	ELSR- NA- ... BOT Class I, GP B*,C,D Class II, GP E,F,G Class III Div. 1 & 2
Power Termination Kit Ex ELVB-SREx-20 BR HT (with gland Peppers A8F 20R M20)	+	+	+	+	+	+	+	+	+	-	-
Power Termination Kit Ex ELVB-SREx-¾ BR HT (with gland Peppers A8F 20R ¾")	+	+	+	+	+	+	+	+	+	-	-
Power Termination Kit ELVB-SRAH-¾ ST (with gland Thomas & Betts 2238)	+	+	+	-	-	-	-	-	-	-	-
Power Termination Kit ELVB-SRAN-¾ ST (with gland Thomas & Betts 2239)	-	-	+	-	-	-	-	-	-	-	-
Heater Entry Kit EL-HAZELECT	+	+	+	+	+	+	+	+	+	+	+
Power Termination Kit EL-SPN 16	-	-	+	-	-	+	+	-	+	-	-



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Accessories	Ordinary Locations			Hazardous Locations							
	ELSR- HA (-GS)	ELSR -HA (-WS)	ELSR- NA (-WS)	ELSR- HA Ex Zone 1	ELSR -HA Ex Div 2	ELSR -NA Ex Zone 1	ELSR -NA Ex Div 2	ELSR- HA Class I, II, III Div 2	ELSR- NA Class I, II, III Div 2	ELSR- HA Class I, GP B,C,D Class II, GP E,F,G Class III Div. 1 & 2	ELSR- NA- ... BOT Class I, GP B*,C,D Class II, GP E,F,G Class III Div. 1 & 2
Cable gland Beisit N12712 Beisit 1/2" NPT	-	-	+	-	-	-	-	-	-	-	-
Cable gland Beisit N3418 Beisit 3/4" NPT	-	-	+	-	-	-	-	-	-	-	-
Power termination kit ELVB-SREx-It (to be used with stand-off Ex-It only)	+	+	+	+	-	+	-	-	-	-	-
Stand-off for separate junction box Ex-It-NA	+	+	+	+	-	+	-	-	-	-	-
Lighted End Termination Kit (Ex-It-LA (stand-off) with LED-unit EL- EOL; EL-EOL- LED)	+	+	+	-	-	-	-	-	-	-	-

* Not included when enclosure GECTT is being used.



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Notes:

1. Installation in accordance with the Canadian Electrical Code (CEC), Part I or the National Electrical Code (NEC) as applicable.
2. The Heating Cable Set/System is comprised of Heating Cable and Kits, both described within this report.
3. The heating cable set ratings are based on the limitations of ratings of both the heating cable and the integral connections. See the “General” section in the CSA Descriptive Report.
4. Additional catalogue suffixes may be added to denote construction options.
5. The maximum permissible circuit size is 40Amps.
6. Usage designations for heating cables are dependent on constructions – Usage designations for heating cables are dependent on constructions – see specific usages under the “DESCRIPTION” section of this report and in the “GENERAL” section.

CONDITIONS OF ACCEPTABILITY

When ELSR NA Heating cables are assembled with the Type EL-SPN 16 Field Splice Connection Kit the minimum installation temperature is limited to -25°C (-13°F)

APPLICABLE REQUIREMENTS

CAN/CSA-C22.2 No 130-16 (Updates 1 & 2)	-	Requirements for Resistance Heating Cables and Heating Device Sets
CAN/CSA 60079-0-15 (February 2019)	-	Electrical Apparatus for Explosive Gas Atmospheres – Part 0: General Requirements
CAN/CSA 60079-7:12 (September 2018)	-	Electrical Apparatus for Explosive Gas Atmospheres – Part 7: Increased Safety “e”
CAN/CSA 60079-30-1:2017	-	Explosive atmospheres – Part 30-1: Electrical resistance trace heating – General and testing requirements
UL 515 (1 st Edition)	-	Explosive atmospheres – Part 30-1: Electrical resistance trace heating – General and testing requirements
IEEE 515-2017	-	IEEE Standard for the Testing, Design, Installation, and Maintenance of Electrical Resistance Trace Heating for Industrial Applications (as referenced from UL 515)
IEEE 515.1-2022	-	IEEE Standard for the Testing, Design, Installation, and Maintenance of Electrical Resistance Trace Heating for Commercial Applications (as referenced from UL 515)
UL 60079-0 (7 th Edition)	-	Explosive Atmospheres - Part 0: Equipment - General Requirements
UL 60079-7 (5 th Edition)	-	Explosive atmospheres – Part 7: Equipment protection by increased safety “e”
UL 60079-30-1 (1 st Edition)	-	Explosive Atmospheres – Part 30-1: Electrical Resistance Trace Heating – General and Testing Requirements



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IEC/IEEE 60079-30-1:15 - Explosive Atmospheres – Part 30-1: electrical resistance trace heating – General and testing requirements (as referenced from CSA and UL 60079-30-1)

Note:

Products certified under Class 2872 01 and 2878 01 have been certified under CSA's ISO/IEC 17065 accreditation with the Standards Council of Canada (SCC). www.scc.ca





Supplement to Certificate of Compliance

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The products listed, including the latest revision described below, are eligible to be marked in accordance with the referenced Certificate.

Product Certification History

Project	Date	Description
80115756	2023-10-31	Lighted End Termination Kit (encapsulated/potted LED lighting circuit), catalogue designation Ex-It-LA with LED unit EL-EOL; alternate kit cat. no. EL-EOL-LED.
70215669	2019-05-30	Update to report 2547790 to include alternate higher profile standoff (IP65 when used with IP65 rated enclosure); zones only rating.
70194739	2018-12-12	Update to CSA report 2547790: a) cat. no. ELSR-HA to increase the maximum voltage rating to 277V ac – with usages ‘GS’; and b) addition of EL-ECSH End Cap (End Termination) – for use with Eltherm heating cable, usages ‘GS’.
70086982	2018-04-6	Addition of IEC/IEEE 60079-30-1:2015.
70049417	2016-06-22	Variation to CSA certificate 2547790 with the scope to Introduce a splice connection kit.
70009329	2015-08-20	Alternate ECTFE jacket for ELSR-NA; Div. 1 rating for ELSR heating cable; and Div. 1 power termination/splice/end seal kit, EL-HAZELECT, part no. 09CA051.
2642335	2014-03-28	Retesting XLPE insulating material long term IR testing.
2547790	2013-09-18	Self Regulating Heating Cable systems Original Certification.