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France Web: www.eltrace.com

Type: Technical Datasheet Self-Regulating Heating Cable Date: 10/01/2022

Document: FT-SRCable ESR-SH-BOT Version: En-Rev.2.082

ESR™ SH-BOT

SELF-REGULATING HEATING CABLE ULTRA HIGH TEMPERATURE

Outer jacket Protective braid
Semi-conductive matrix

First insulation only: ESR-SH-xx Protective braid: ESR-SH-xx-B

Protective braid and outer jacket: ESR-SH-xx-BOT

High temperature insulation

Bus wire

HEATING CABLE OVERVIEW

ESR™-SH-BOT self-regulating heating cables are designed for very high temperature holding applications for processes up to +250 °C (483°F).

It is offered in different powers ranging from 100 W/m at 10 °C, which offers exceptional possibilities for industrial processes.

Approved for hazardous, explosive, corrosive and healthy areas, the anti-corrosion outer jacket provides maximum protection in the harshest environments.

The **ESR™-SH-BOT** is resistant to organic and corrosive chemicals whether in the oil, gas or petrochemical industries.

APPLICATION

Surface type	Metallic
Chimical resistance	Very good, contact your <i>ELTRACE</i> représentative
Areas of use	Normal, corrosive or explosive area (contact us)

ADVANTAGES

- $\sqrt{}$ A highly chemical resistant outer jacket.
- $\sqrt{}$ The so-called "parallel" heating cable technology allows you to cut to the desired length.
- $\sqrt{}$ A self-regulating heating cable suitable for hazardous and corrosive atmospheres.
- $\sqrt{}$ Saving energy through self-regulation consumes only what is necessary.
- $\sqrt{}$ There is no risk of overheating.
- √ The Box type reel storage system allows simple, fast and practical handling.
- \checkmark Several powers available up to 100 W/m @ 10 °C
- $\sqrt{}$ A product available in stock.



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PRODUCT QUALIFICATION

ATEX, UE-declaration (CE), IP67

TECHNICAL CHARACTERISTICS

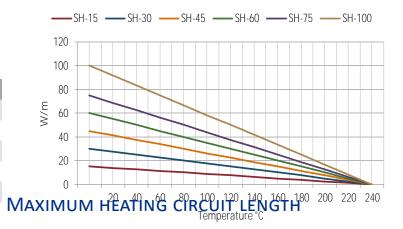
Supply voltage	230 V (110 V on demand)		
Maximum exposure temperature - power on	250 °C (482°F)		
Maximum exposure temperature - power off	250 °C (482°F)		
Temperature class (T-RATING)	T3 (T2 pour le 75 W/m et 100 W/m)		
Minimum bend radius	35 mm à 20 °C (70 °F)		
Minimum installation temperature	-40 °C (-40 °F)		
Weight (BOT version)	146 kg/km (15-75W) - 195 kg/km (100W)		
Dimensions $^{\textcircled{1}}$	12.1 mm × 5.4mm (15-75 W/m)		

^①Tolérance: ±0.5 mm (± 0.02 in)

THERMAL CHARACTERISTICS

Nominal power supplied at 230 V on insulated metal pipe

REFERENCE	POWER AT 10 °C - (50 °F)
SH-15-BOT	15 W/m
SH-30-BOT	30 W/m
SH-45-BOT	45 W/m
SH-60-BOT	60 W/m
SH-75-BOT	75 W/m
SH-100-BOT	100 W/m



REFERENCE	MAXIMUM CIRCUIT LENGTH
SH-15-BOT	170 m
SH-30-BOT	120 m
SH-45-BOT	100 m
SH-60-BOT	85 m
SH-75-BOT	75 m
SH-100-BOT	80 m



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MAXIMUM CIRCUIT LENGTHS BASED ON CIRCUIT BREAKER SIZE

DESIGNATION	STARTING TEMPERATURE	MAX. CIRCUIT LENGTHS				
DESIGNATION	STARTING TEMPERATURE	10 A	16 A	20 A	32 A	50 A
SH-15-BOT	-20 °C	62 m	98 m	122 m	172 m	172 m
	0 °C	70 m	112 m	140 m	172 m	172 m
	10 °C	76 m	122 m	154 m	172 m	172 m
SH-30-BOT	-20 °C	40 m	66 m	82 m	122 m	122 m
	0 °C	46 m	74 m	92 m	122 m	122 m
	10 °C	52 m	82 m	102 m	122 m	122 m
SH-45-BOT	-20 °C	30 m	50 m	62 m	98 m	100 m
	0 °C	34 m	56 m	70 m	100 m	100 m
	10 °C	38 m	62 m	76 m	100 m	100 m
SH-60-BOT	-20 °C	20 m	32 m	40 m	62 m	86 m
	0 °C	28 m	44 m	56 m	86 m	86 m
	10 °C	20 m	32 m	40 m	62 m	86 m
SH-75-BOT	-20 °C	12 m	18 m	24 m	38 m	60 m
	0 °C	16 m	26 m	34 m	54 m	76 m
	10 °C	22 m	34 m	44 m	70 m	76 m
SH-100-BOT	-20 °C	16 m	24 m	30 m	50 m	76 m
	0 °C	18 m	28 m	34 m	56 m	84 m
	10 °C	18 m	30 m	36 m	58 m	84 m

Circuit length with C curve circuit breaker.

The protection of each circuit must comply with NF C 15-100.

Personal protection is ensured by a residual current device of 30 mA maximum in increments of 7.5 kW maximum, if the heating elements are supplied at 230 volts.

ELECTRIC HEAT TRACING ACCESSORIES

We supply a full range of accessories for our self-regulating heating cables. Connection kits, quick connection boxes, junction and branch boxes. Our products have different certifications depending on your applications. We recommend that you contact our engineers to ensure system compliance.



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INSTALLATION OF HEATING CABLES

ELTRACE self-regulating cables must be installed in accordance with the standards in force on the day of installation (specifications for common technical implementation of CSTB, NF C 15-100, VDE, etc.) for the points where they apply, as well than the recommendations for use.

SELF-REGULATION PRINCIPLE

The colder it is, the more the polymer contracts and thus facilitates the flow of current and the more the cable heats up. Conversely, the hotter it is, the more the polymer expands and prevents the passage of current, the less the cable heats up.

Thanks to its so-called "parallel" technology, the heating cable can be cut to the desired length directly on site.

For more information, contact your **ELTRACE** distributor or representative now.

CONDITIONING

Standard lengths on reel: 500 m (+/- 5%). Other lengths are available, please contact your **ELTRACE** representative.

MARKING

All *ELTRACE* self-regulating cables are marked [YYMMDD] (year, month, day) to ensure the traceability of our productions.

Personalized markings can be made in accordance with the regulations..