

Electrical heating cable for freeze protection or temperature maintenance.

## **FREEZSTOP REGULAR** Self-Regulating Heating Cable

- Automatically adjusts heat output in response to increasing or decreasing pipe temperature.
- Can be cut-to-length.
- Inherently temperature safe.
- Suitable for use in safe, hazardous and corrosive areas.
- Available up to 277V AC/DC.
- Full range of controls and accessories available.

### DESCRIPTION

**FREEZSTOP REGULAR** is an industrial grade, self-regulating heating cable that can be used for freeze protection or temperature maintenance to 85°C.

It can be cut-to-length on site and exact piping lengths can be matched without any complicated design considerations.

**FREEZSTOP REGULAR** is approved for use in non-hazardous, hazardous and corrosive environments to world wide standards.

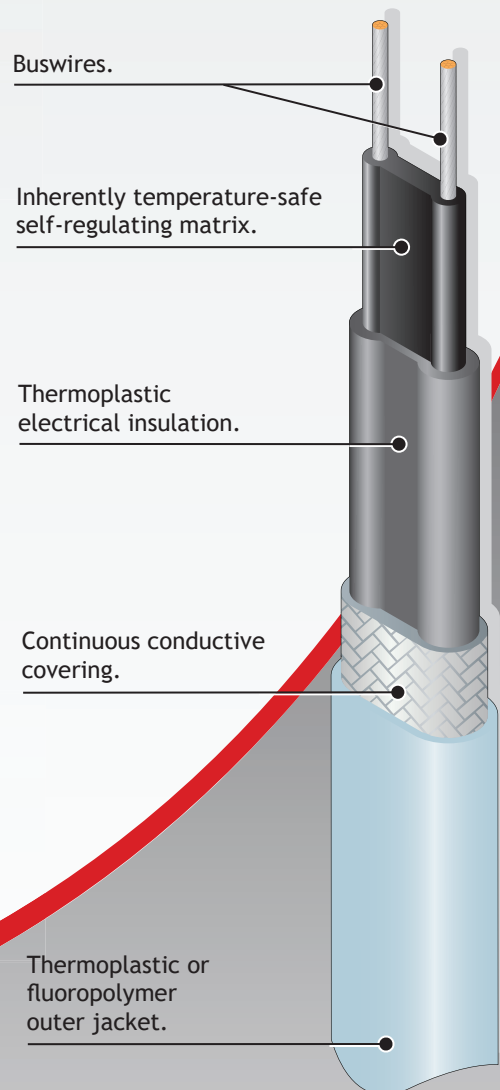
Its self-regulating characteristics improve safety and reliability. **FREEZSTOP REGULAR** will not overheat or burnout, even when overlapped upon itself. Its power output is self-regulated in response to the pipe temperature.

The installation of **FREEZSTOP REGULAR** is quick and simple and requires no special skills or tools. Termination, splicing and power connection components are all provided in convenient kits.

### INHERENTLY TEMPERATURE-SAFE

“ The inherent ability to self-regulate at a temperature level below the maximum product rating and withstand temperature of the insulating materials, without the need for temperature control.”

Other manufacturers self-regulating products are typically limited to a maximum energised temperature, typically 65°C at which point, their retained power output prevent the cable from self-regulating at its own limiting temperatures. All such products require temperature control to ensure their own temperature safety.



*FSR-CF is supplied with a black fluoropolymer outer-jacket.*



The Heat Tracing Authority™

## SPECIFICATION

**MAXIMUM CONTINUOUS EXPOSURE TEMPERATURE (Power ON):** 85°C† (185°F)

**MAXIMUM PERMISSIBLE EXPOSURE TEMPERATURE (Power OFF):** 85°C† (185°F)

**MINIMUM OPERATING TEMPERATURE:** -40°C (-40°F)

**MINIMUM INSTALLATION TEMPERATURE:** -40°C (-40°F)

**POWER SUPPLY:** 12 - 277V AC/DC

### TEMPERATURE CLASSIFICATION:

up to 40W/m @ nom voltage - T6 (85°C)  
up to 31W/m @ nom 230V powered to 277V - T6 (85°C)  
>40W/m @ nom voltage - T4 (135°C)  
>31W/m @ nom 230V powered up to 277V - T4 (135°C)

**INGRESS PROTECTION** IP67

### WEIGHTS & DIMENSIONS:

Type Ref	Dimensions (mm) +/-0.5	Weight kg/100m	Min Bend radius	Gland Size
FSR..C	11.75 x 4.75	9.5	30mm	M20
FSR..CT	12.95 x 5.95	12.9	35mm	M20
FSR..CF	12.65 x 5.65	14.8	35mm	M20

### APPROVAL DETAILS:

ATEX†	- CML 19ATEX3378
IECEX†	- CML 19.0121
EAC†	- EA3C RU C-GB.HA65.B.01383/22
DNV†	- TAE0000272
CNEX	- CNEx19.1555U
UKEX	- CML 21UKEX31139
CCC	- 2020312312000119

### ORDERING INFORMATION:

Example:

Output 17W/m at 10°C  
FREEZSTOP REGULAR  
Supply Voltage 220 - 277V AC/DC  
Metal Braid  
Thermoplastic Outerjacket

17 FSR 2 - C T

### ATEX, IECEX & UKEX MARKINGS:

Ex II 2GD  
Ex 60079-30-1 IIC T6 Gb  
Ex 60079-30-1 IIC T85°C Db  
Ex 60079-30-1 IIC T4 Gb  
Ex 60079-30-1 IIIC T135°C Db

EN 60079-0:2018

EN 60079-30-1:2017

### MAXIMUM LENGTH (m) vs. CIRCUIT BREAKER SIZE:

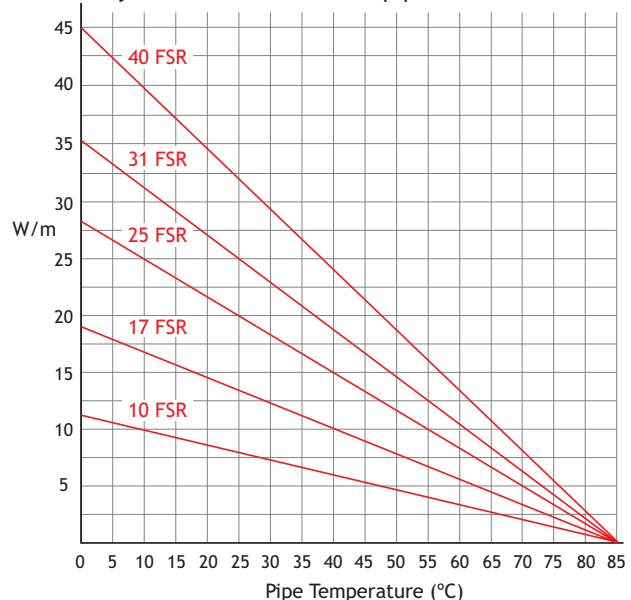
The following circuit details relate specifically to the trace heating of pipework and equipment. For any other application consult Heat Trace.

Cat Reference	Start-up Temperature	230V			
		10A	16A	20A	32A
10FSR	10°C	136	198	198	198
	0°C	122	188	188	188
	-20°C	108	174	176	176
	-40°C	96	154	166	166
17FSR	10°C	92	148	152	152
	0°C	84	134	144	144
	-20°C	74	118	136	136
	-40°C	66	106	128	128
25FSR	10°C	74	118	124	124
	0°C	68	108	120	120
	-20°C	60	94	112	112
	-40°C	52	84	106	106
31FSR	10°C	58	92	112	112
	0°C	52	84	104	106
	-20°C	46	74	92	100
	-40°C	42	66	82	94
40FSR	10°C	46	74	92	98
	0°C	42	66	84	94
	-20°C	36	58	74	88
	-40°C	32	52	66	84

Residential buildings	Commercial buildings	Industry and Infrastructure
MCB's certified IEC 60898-1	MCB's certified according both IEC 60898-1 & IEC 60947-2	

### THERMAL RATINGS:

Nominal output at 115V or 230V when FSR is installed on thermally insulated carbon steel pipes.



### FURTHER INFORMATION:

Please consult the appropriate termination instructions and the Heat Trace Design, Installation & Maintenance Manual (HTDIMM 010) for further details.



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