

A high temperature self-regulating heating cable.

## FailSafe + Inherently Temperature-Safe Heating Cable

- 225°C exposure temperature withstand, (energised or switched off).
- *Inherently temperature-safe. (ITS)*
- Power outputs to 60W/m at 10°C
- External temperature controls not necessary.

### DESCRIPTION

FS+ is a high temperature self-regulating heating cable, having an exposure limit of 225°C, energised or not.

It may be provided with a continuous extruded metal jacket for applications where high mechanical strength is required or a metal braid where flexibility is preferred.

The continuous metal outer jacket is ductile, yet withstands high mechanical loads, thus averting damage when being installed in arduous environments.

Easy terminations, cut-to-length.

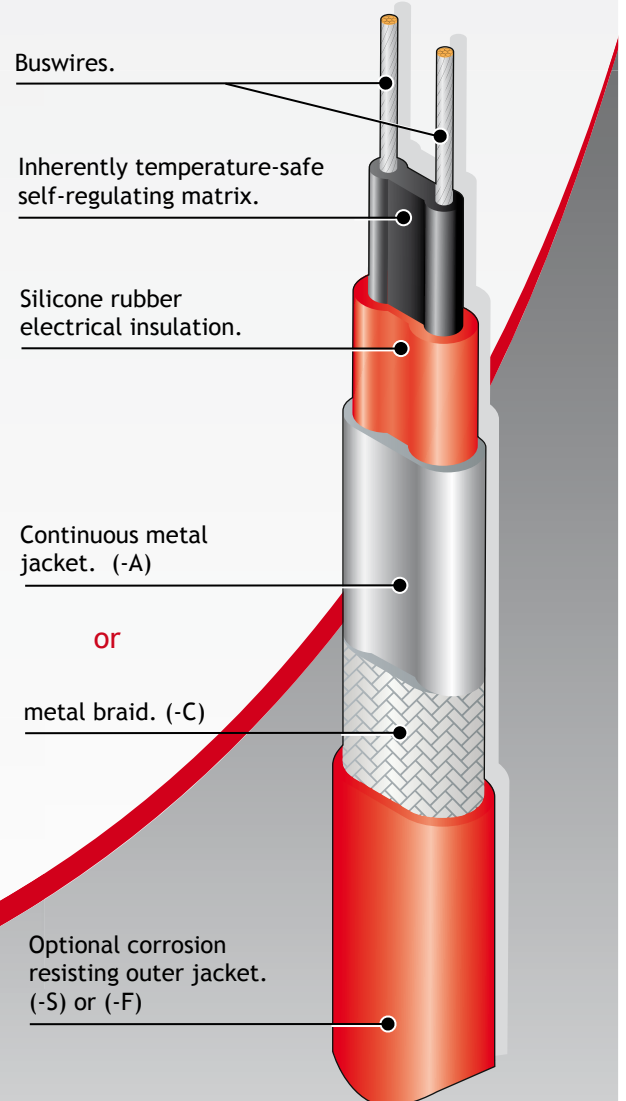
Safest ever self-regulating product range for high temperature exposure; will not overheat even when exposed to 225°C when energised or switched off as it is *inherently temperature-safe*.

ATEX/IECEX Approved.

### 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.”

Similar competitor self-regulating products are typically limited to a maximum energised temperature, typically 120°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.



## SPECIFICATION

**MAXIMUM CONTINUOUS EXPOSURE TEMPERATURE:** 225°C (437°F)  
(ENERGISED OR SWITCHED OFF)

**MINIMUM OPERATING TEMPERATURE:** -65°C\* (-85°F)

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

**POWER SUPPLY:** 1 - 277V AC

### WEIGHTS & DIMENSIONS:

Type Ref	Dimensions (mm) +/-0.5	Weight kg/100m	Min Bending radius	Gland Size
FS+A	10.35 x 6.75	14.3	20mm	M20
FS+AS	13.25 x 7.85	14.7	25mm	M20
FS+AF	12.05 x 6.65	14.6	30mm	M20
FS+C	10.45 x 5.05	12.2	20mm	M20
FS+CS	12.45 x 7.05	12.5	25mm	M20
FS+CF	11.35 x 5.95	12.5	30mm	M20

### APPROVAL DETAILS:

ATEX - Sira 12ATEX3136  
IECEX - SIR 12.0054  
DNV-GL - E12834  
EAC\* - TC RU C-GB.F505.B.00186

### ORDERING INFORMATION:

Example; 45 FS+ 2 - A or C S or F

Output 45W/m at 10°C  
FS+ Heating Cable  
Supply Voltage 220 - 277V AC  
Continuous Metal Jacket  
Metal Braid  
Outer Sheath, Silicone Rubber  
Outer Sheath, Fluoropolymer

### ACCESSORIES:

Heat Trace supply a complete range of accessories including termination/splice kits, end seals, junction boxes and controls. Such items carry separate approvals from the heating cables. Use only approved components, as per system certification.

### FURTHER INFORMATION:

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

**MAXIMUM LENGTH (m) vs. CIRCUIT BREAKER SIZE:**  
The following circuit details relate specifically for the trace heating of pipework and equipment. For any other application consult Heat Trace.

Cat Reference	Start-up Temperature	230V			
		10A	16A	20A	32A
15FS+	10°C	76	122	154	154
	0°C	70	112	140	146
	-20°C	62	98	122	138
	-40°C	52	82	102	126
30FS+	10°C	52	82	102	108
	0°C	46	74	92	104
	-20°C	40	66	82	98
	-40°C	30	50	62	88
45FS+	10°C	38	62	76	88
	0°C	32	52	66	84
	-20°C	24	38	46	76
	-40°C	14	24	28	46
60FS+	10°C	24	38	46	76
	0°C	18	30	36	58
	-20°C	12	20	26	42
	-40°C	8	12	16	24

For use with Type C circuit breakers to IEC60898

### THERMAL RATINGS:

Nominal output at 230V when FS+ is installed on thermally insulated carbon steel pipes, being fixed with aluminium fixing tape.

