

Extremely high temperature self-regulating heating cable.

## FailSafe Ultimo

Inherently Temperature-Safe 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.
- High power outputs to 100W/m at 10°C.
- Full range of controls and accessories available.

### DESCRIPTION

FSU is an extremely high temperature self-regulating heating cable, having an exposure limit of 250°C, energised or not.

Easy terminations, cut-to-length.

Safest ever self-regulating product range for extremely high temperature exposure; will not overheat even when exposed to 250°C when energised or switched off as it is inherently temperature-safe.

ATEX, IECEx & UKEX 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.

Buswires.

Inherently temperature-safe self-regulating matrix.

High temperature electrical insulation.

Continuous conductive covering.

Optional corrosion resisting outer jacket. (-F)



The Heat Tracing Authority™

## SPECIFICATION

**MAXIMUM EXPOSURE TEMPERATURE:** 250°C (482°F)  
(ENERGISED OR SWITCHED OFF)

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

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

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

**TEMPERATURE CLASSIFICATION: #**

15FSU, 30FSU, 45FSU & 60FSU @ nom 230V - T3 (200°C)  
75FSU & 100FSUw @ nom 230V - T2 (300°C)

### WEIGHTS & DIMENSIONS:

Type	Dimensions.	Weight	Min Bending	Gland
Ref	(mm) +/-0.5	kg/100m	radius	Size
FSU-N	11.3 x 4.6	11.3	30mm	M20
FSU-NF	12.5 x 5.8	14.6	35mm	M20
FSUw-N	13.6 x 4.8	15.8	30mm	M25
FSUw-NF	14.8 x 6.0	19.5	35mm	M25

### APPROVAL DETAILS:

ATEX	- CML 19ATEX3385, CML 19ATEX3386
IECEX	- CML 19.0128, CML 19.0129
DNV	- TAE00002KC
UKEX	- CML 21UKEX31143, CML UKEX31145
*CCC	- 2020312312000120

### ORDERING INFORMATION:

Example: **75 FSU 2 - N F**  
Output 75W/m at 10°C  
FSU Heating Cable  
Supply Voltage 220 - 277V AC/DC  
Metal Braid  
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 Design, Installation and Maintenance Manual (HTDIMM 010) for further details.

**INGRESS PROTECTION:** IP67

### ATEX, IECEX & UKEX MARKINGS:

Ex II 2 GD  
Ex 60079-30-1 IIC T3 or T2# Gb  
Ex 60079-30-1 IIIC T200°C or T300°C Db  
EN 60079-0: 2018  
EN 60079-30-1: 2017

\*denotes FSU only.

### 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.

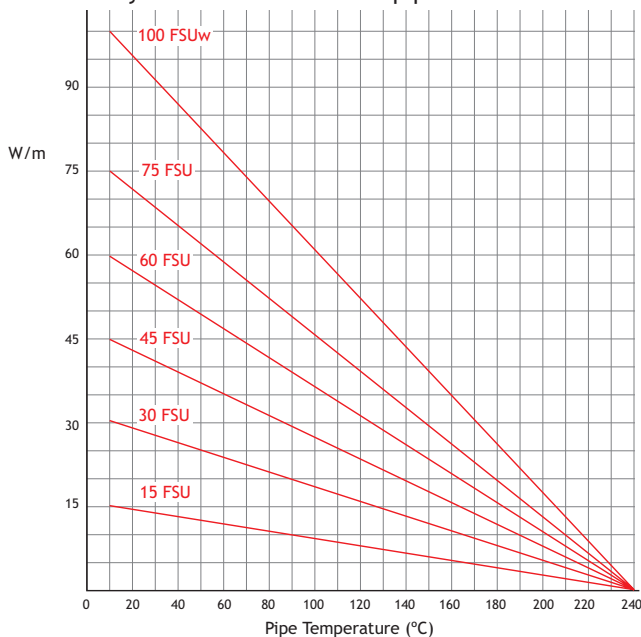
Cat	Environmental	230V				
Reference	Start-up Temp.	10A	16A	20A	32A	50A
15FSU	10°C	76	122	154	172	172
	0°C	70	112	140	172	172
	-20°C	62	98	122	172	172
	-40°C	52	82	102	164	172
30FSU	10°C	52	82	102	122	122
	0°C	46	74	92	122	122
	-20°C	40	66	82	122	122
	-40°C	34	54	68	110	122
45FSU	10°C	38	62	76	100	100
	0°C	34	56	70	100	100
	-20°C	30	50	62	98	100
	-40°C	22	34	44	70	100
60FSU	10°C	30	50	62	86	86
	0°C	28	44	56	86	86
	-20°C	20	32	40	62	86
	-40°C	12	18	24	38	60
75FSU	10°C	22	34	44	70	76
	0°C	16	26	34	54	76
	-20°C	12	18	24	38	60
	-40°C	8	12	14	22	36
100FSUw	10°C	18	30	36	58	84
	0°C	18	28	34	56	84
	-20°C	16	24	30	50	76
	-40°C	14	22	28	46	70

For use with Type C circuit breakers to IEC 60898

These circuit lengths may be exceeded dependant on specific design parameters.

### THERMAL RATINGS:

Nominal output at 230V when FSU is installed on thermally insulated carbon steel pipes.



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