



# FAIL SAFE SUPER

## High Temperature Self-Regulating Heating Cable (FSS)



### DESCRIPTION

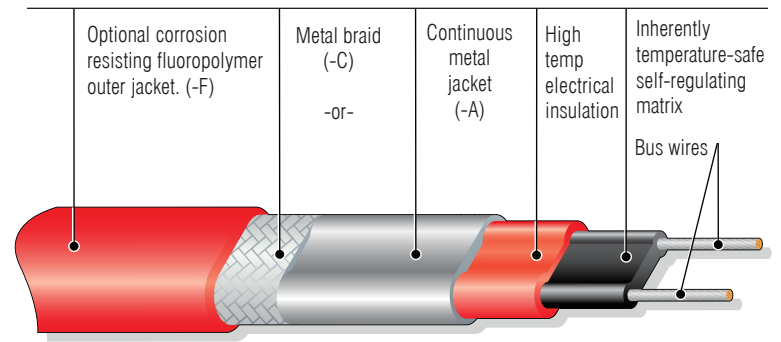
Fail Safe Super (FSS) is a very high temperature self-regulating heating cable, having an exposure limit of 225 °C, energised or not.

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 very high temperature exposure; will not overheat even when exposed to 225 °C when energised or switched off as it is inherently temperature-safe (ITS). ATEX and IECEx approved.

### CABLE CONSTRUCTION



### FEATURES

- 225 °C exposure temperature withstand, (energised or switched off).
- Inherently temperature-safe (ITS).
- High power outputs to 75W/m at 10 °C.
- External temperature controls not necessary.
- Easy terminations, cut-to-length, no waste.
- ATEX/ IECEx approved.

### INHERENTLY TEMPERATURE-SAFE

Fail Safe Super has 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.

### CERTIFICATIONS

EAC – TC RU C-GB.AA87.B.00610



### SPECIFICATIONS

<b>Voltage</b>	12VAC - 277VAC.
<b>Ingress protection</b>	IP67.
<b>Installation temperature</b>	Min. installation temperature: -40 °C.
<b>Operating temperature</b>	Min. operating temperature: -65 °C.
<b>Continuous exposure</b>	Max. exposure temperature: 225 °C. Energised or switched off.

### INSTALLATION

Please consult the appropriate termination instructions and the Heat Trace Design, Installation & Maintenance Manual for further details. Electrical connection of the heating system and thermostat should be done only by a qualified electrician.

### WARRANTY

Warranted free from manufacturers defect for 2 years. Visit [www.britech.ca](http://www.britech.ca) for limited warranty details.



Made in England

### MAX. HEATING CIRCUIT LENGTH AT 120V (m)

PRODUCT #	START-UP TEMPERATURE	CIRCUIT BREAKER CAPACITY <sup>1</sup>				
		10A	16A	20A	32A	50A
15FSS	10 °C (50 °F)	40	64	81	90	90
	0 °C (32 °F)	37	59	73	90	90
	-20 °C (-4 °F)	33	51	64	90	90
	-40 °C (-40 °F)	27	43	53	86	90
30FSS	10 °C (50 °F)	27	43	53	64	64
	0 °C (32 °F)	24	39	48	64	64
	-20 °C (-4 °F)	21	35	43	64	64
	-40 °C (-40 °F)	18	28	36	58	64
45FSS	10 °C (50 °F)	20	33	40	52	52
	0 °C (32 °F)	18	29	37	52	52
	-20 °C (-4 °F)	16	26	33	51	52
	-40 °C (-40 °F)	12	18	23	37	52
60FSS	10 °C (50 °F)	16	26	33	45	45
	0 °C (32 °F)	15	23	29	45	45
	-20 °C (-4 °F)	11	17	21	33	45
	-40 °C (-40 °F)	7	10	13	20	32
75FSS	10 °C (50 °F)	13	21	26	40	40
	0 °C (32 °F)	10	16	20	32	40
	-20 °C (-4 °F)	8	12	14	22	35
	-40 °C (-40 °F)	4	7	9	14	21

### MAX. HEATING CIRCUIT LENGTH AT 208V (m)

PRODUCT #	START-UP TEMPERATURE	CIRCUIT BREAKER CAPACITY <sup>1</sup>				
		10A	16A	20A	32A	50A
15FSS	10 °C (50 °F)	67	108	137	152	152
	0 °C (32 °F)	62	99	124	152	152
	-20 °C (-4 °F)	55	87	108	152	152
	-40 °C (-40 °F)	46	73	90	145	152
30FSS	10 °C (50 °F)	46	73	90	108	108
	0 °C (32 °F)	41	65	82	108	108
	-20 °C (-4 °F)	36	59	73	108	108
	-40 °C (-40 °F)	30	48	60	98	108
45FSS	10 °C (50 °F)	34	55	67	88	88
	0 °C (32 °F)	30	49	62	88	88
	-20 °C (-4 °F)	26	44	55	87	88
	-40 °C (-40 °F)	20	30	39	62	88
60FSS	10 °C (50 °F)	26	44	55	77	77
	0 °C (32 °F)	25	39	49	77	77
	-20 °C (-4 °F)	18	28	36	55	77
	-40 °C (-40 °F)	11	16	21	34	54
75FSS	10 °C (50 °F)	21	36	44	67	67
	0 °C (32 °F)	16	26	34	54	67
	-20 °C (-4 °F)	13	20	23	37	59
	-40 °C (-40 °F)	7	11	14	23	36

### MAX. HEATING CIRCUIT LENGTH AT 240V (m)

PRODUCT #	START-UP TEMPERATURE	CIRCUIT BREAKER CAPACITY <sup>1</sup>				
		10A	16A	20A	32A	50A
15FSS	10 °C (50 °F)	79	127	161	179	179
	0 °C (32 °F)	73	117	146	179	179
	-20 °C (-4 °F)	65	102	127	179	179
	-40 °C (-40 °F)	54	86	106	171	179
30FSS	10 °C (50 °F)	54	86	106	127	127
	0 °C (32 °F)	48	77	96	127	127
	-20 °C (-4 °F)	42	69	86	127	127
	-40 °C (-40 °F)	35	56	71	115	127
45FSS	10 °C (50 °F)	40	65	79	104	104
	0 °C (32 °F)	35	58	73	104	104
	-20 °C (-4 °F)	31	52	65	102	104
	-40 °C (-40 °F)	23	35	46	73	104
60FSS	10 °C (50 °F)	31	52	65	90	90
	0 °C (32 °F)	29	46	58	90	90
	-20 °C (-4 °F)	21	33	42	65	90
	-40 °C (-40 °F)	13	19	25	40	63
75FSS	10 °C (50 °F)	25	42	52	79	79
	0 °C (32 °F)	19	31	40	63	79
	-20 °C (-4 °F)	15	23	27	44	69
	-40 °C (-40 °F)	8	13	17	27	42

Max. circuit length (m) for use with type C circuit breakers to IEC 60898. To calculate circuit length in ft. multiply by 3.28.

<sup>1</sup> Breaker sizing should be based on the National Electrical Code, Canadian Electrical Code or any other applicable code. The NEC and CEC require ground-fault protection of equipment for each branch circuit supplying electric heating equipment. Check local codes for ground-fault protection requirements.

## TEMPERATURE CLASSIFICATION

- 15FSS, 30FSS, 45FSS & 60FSS @ 230V - T3 (200 °C).
- 75FSS @ 230V - T2 (300 °C).

Note: for any other voltages contact the factory.

## WEIGHTS & DIMENSIONS

Product #	Dimensions (mm) +/-0.5	Weight kg/100 m	Min. bending radius	Gland size
FSS-A	12.25 x 6.05	13.7	50 mm	M20
FSS-AF	13.15 x 6.95	17.4	50 mm	M20
FSS-C	10.55 x 4.35	10.4	30 mm	M20
FSS-CF	11.45 x 5.25	13.4	35 mm	M20

## ORDERING INFORMATION:

Product #: 30 FSS X - A or C option F

Output 30w/m at 10 °C \_\_\_\_\_

Fail Safe Super \_\_\_\_\_

Supply Voltage: 1=120V, 2=208-277V \_\_\_\_\_

Continuous Outer jacket \_\_\_\_\_

Metal Braid \_\_\_\_\_

Outer Sheath, Fluoropolymer \_\_\_\_\_

Note: Special order only. Minimum order quantity may apply.

## HEATING POWER

Power temperature curves 120V and 240V

