

ELECTRIC HEATER

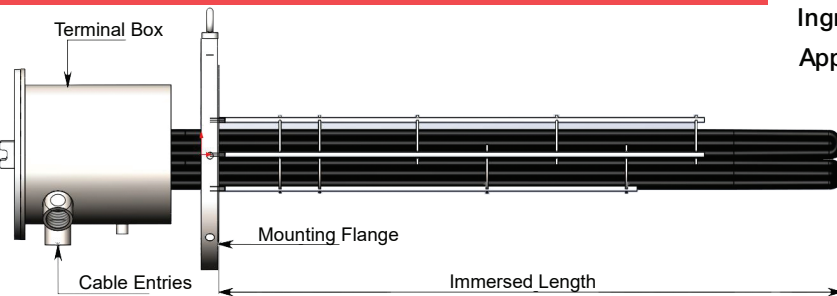
THE KEY TO THERMAL AND PROCESS HEATING



The standard heaters offer off-the-shelf solutions for heating in Zone 1 or 2 hazardous areas and are certified to ATEX/IECEX flameproof standards. Available in flange and thread connections, a heater can be constructed from SS304L or SS316L to suit client's budget.

A selection of designs for heat flux covers different process mediums from asphalt (bitumen), hot oil, chemical solutions to water, etc.

FLANGE MOUNTING



Ambient
Terminal Box
Ingress Protection
Applications

-50°C ~+ 60°C

Cast Iron

IP66

Low heat flux heaters

- all kinds of process medium including gas, crude oil and asphalt

Medium heat flux heaters

- CIP tank and caustic solutions

High heat flux heaters

- mainly targeted at water heating

Technical Data

Duty Range

1kW, 2kW, 3kW, 5kW
(Single Phase),
5 ~ 100kW (Three Phase)

Flange

SS304L, SS316L

Working Pressure/
Temperature

15 Barg/180°C (limited to
150lb flanges)

Hazardous
Certification

EX II 2 G/D, Ex db
IIA/IIB/IIC T1-T6 Gb, Ex tb
IIIC T85 ~ T450°C DB

Elements

SS304L, SS316L

Nominal Voltage

230V, Single Phase/400V,
Three Phase

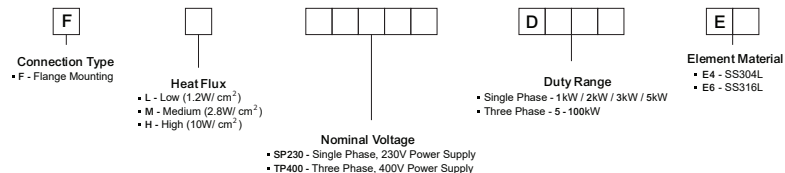
Over-temperature
Protection

1 x elements over-temperature
protection (thermostatic control)

Process Control
(optional)

1 x thermostatic control, please
indicate set point

Place Your Order



Power Supply (V)	Model	Heater Duty (kW)	Immersed Length (mm)	Flange Size (inch)	NOS. of Cable Entries (see notes)	
230V SP	L	F-L-SP230-D001-XX	1	580.2	3	Type A
		F-L-SP230-D002-XX	2	757.2	4	Type A
		F-L-SP230-D003-XX	3	578.6	6	Type B
		F-L-SP230-D005-XX	5	932.6	6	Type B
	M	F-M-SP230-D001-XX	1	504.2	3	Type A
		F-M-SP230-D002-XX	2	504.2	3	Type A
		F-M-SP230-D003-XX	3	504.2	4	Type A
		F-M-SP230-D005-XX	5	807.2	4	Type A
H	F-H-SP230-D002-XX	2	304.2	3	Type A	
	F-H-SP230-D005-XX	5	368.2	3	Type A	
400V 3PH	L	F-L-TP400-D005-XX	5	932.6	6	Type B
		F-L-TP400-D008-XX	8	991.6	6	Type B
		F-L-TP400-D012-XX	12	1109.6	6	Type B
		F-L-TP400-D018-XX	18	1106.4	8	Type C
		F-L-TP400-D025-XX	25	1308.4	8	Type C
		F-L-TP400-D030-XX	30	1560.4	3	Type C

400V 3PH	M	F-M-TP400-D005-XX	5	805.6	6	Type B
		F-M-TP400-D008-XX	8	654.6	6	Type B
		F-M-TP400-D012-XX	12	654.6	6	Type B
		F-M-TP400-D018-XX	18	730.6	6	Type B
		F-M-TP400-D025-XX	25	802.4	8	Type C
		F-M-TP400-D030-XX	30	802.4	8	Type C
	H	F-H-TP400-D005-XX	5	262.2	4	Type A
		F-H-TP400-D010-XX	10	474.2	4	Type A
		F-H-TP400-D020-XX	20	898.2	4	Type A
		F-H-TP400-D035-XX	35	790.6	6	Type B
		F-H-TP400-D050-XX	50	755.6	6	Type B
		F-H-TP400-D080-XX	80	724.4	8	Type C
		F-H-TP400-D100-XX	100	752.4	8	Type C

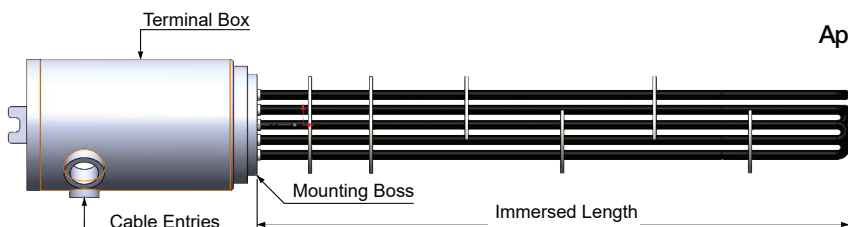
NOTES

Type A: 1 x M20, 1 x M25 / M20

Type B: 1 x M20, 2 x M32 / M20

Type C: 1 x M20, 2 x M40 / M32

THREAD MOUNTING



Terminal Box

Ingress Protection

Applications

Cast Iron

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Low heat flux heaters

- all kinds of process medium including crude oil and asphalt

Medium heat flux heaters

- CIP tank and caustic solutions

High heat flux heaters

- mainly targeted at water heating

1 x elements over-temperature protection (thermostatic control)

1 x thermostatic control, please indicate set point

Technical Data

Duty Range

1kW, 2kW, 3kW, 5kW
(larger duties available in flange connection)

Boss

Brass

Working Pressure/ Temperature

Up to 5 Barg / Up to 80°C

Hazardous Certification

EX II 2 G/D, Ex db
IIA/IIB/IIC T1-T6 Gb, Ex tb
IIIC T85 ~ T450°C DB

Elements

SS304L, SS316L

Nominal Voltage

230V, Single Phase

Ambient

-50°C ~ +60°C

Over-temperature Protection

Process Control (optional)

Place Your Order

T **S P 2 3 0** **D** **E**

Connection Type
 • T - Thread Mounting

Heat Flux
 • L - Low (1.2W/cm²)
 • M - Medium (2.8W/cm²)
 • H - High (10W/cm²)
*Subject to applications

Nominal Voltage
 • SP230 - Single Phase, 230V Power Supply

Duty Range
 • Single Phase - 1kW / 2kW / 3kW / 5kW

Element Material
 • E4 - SS304L
 • E6 - SS316L

	Model	Heater Duty (kW)	Immersed Length (mm)	Mounting Thread Size (inch)	NOS. of Cable Entries
L	F-L-SP230-D001-XX	1	598	2	1 x M20, 1 x M25
	F-L-SP230-D002-XX	2	598	3	
	F-L-SP230-D003-XX	3	874	3	
M	F-M-SP230-D001-XX	1	401	2	
	F-M-SP230-D002-XX	2	519	2	
	F-M-SP230-D003-XX	3	578	3	
	F-M-SP230-D005-XX	5	638	3	
H	F-H-SP230-D002-XX	2	443	2	
	F-H-SP230-D005-XX	5	543	2	

NOTES

Heaters with thread connection is not recommended for gas processes.



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