



Anticondensation Heaters

Application

Enclosure heaters are often necessary to prevent failures or corrosion caused by low temperatures or high humidity inside the enclosure. Such conditions are likely to occur when ambient temperature is low and the equipment inside the enclosure is not powered or fails to dissipate enough heat to keep enclosure temperature above the minimum threshold. Outdoor enclosures, for instance, are almost always in such conditions.

Safety

According to the type of heater, surface temperature is limited either by a PTC or by an over temperature safety switch. This allows a safe operation and a self-adjusted heating power. All heaters are in Class II, except FSHT and FMHT series in Class I.

Wide range of solutions

Alfa Electric offers a wide range of solutions, all for DIN rail mounting:

SHT – PTC heaters with connection on terminals, 25-150W

SHT/W – PTC heaters with wire connection, 15-50W

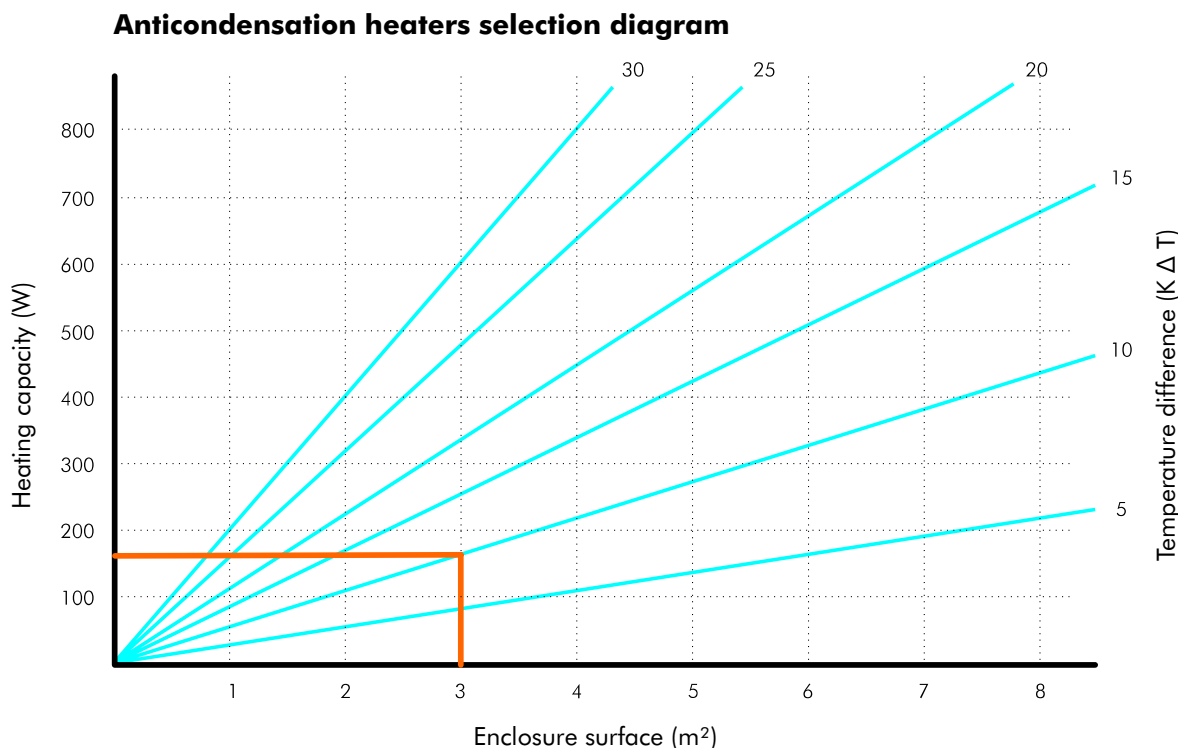
FSHT – Resistor heaters, fan assisted, 250-500W

MHT – PTC mini heaters, 5-30W

FMHT – PTC mini heaters, fan assisted, 75-230W

Fast installation

Installation is fast and simple. All units are designed for fast mounting on 35mm DIN EN 50022 rail.

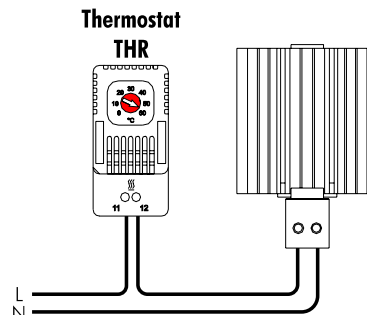


Example:

Enclosure surface 3m²
Temperature difference 10K
Heating capacity required 170W

Possible heater solutions:

- n. 2 SHT100
- n. 1 FSHT250
- n. 1 FMHT230



SHT

PTC HEATERS, TERMINAL CONNECTION

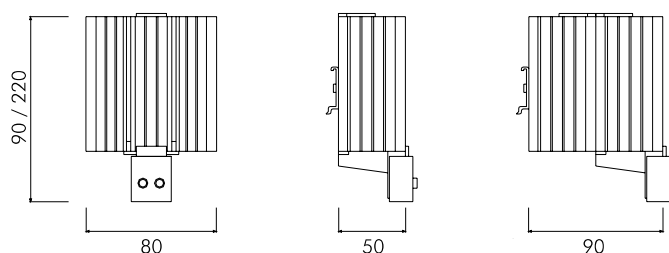


Features	Unit	SHT25	SHT50	SHT75	SHT100	SHT125	SHT150
Heating Capacity*	W	25	50	75	100	125	150
Power supply	V	110-250V AC or DC					
Max. current	A	2A	2A	4A	4A	6A	6A
Heating element type	-	PTC resistor, self regulating					
Electrical connections	-	2 screw terminals for stranded or rigid wire 2.5 mm ²					
Protection class IEC	-	Class II					
Protection degree EN60529	-	IP20					
Operating temperature	°C (°F)	-45/+70 (-49/+158)					
Storage temperature	°C (°F)	-45/+70 (-49/+158)					
Radiator	-	Extruded aluminium profile, anodized					
Mounting	-	Clip for mounting on DIN rail 35 mm EN50022					
Installation position	-	Best efficiency in vertical position					
Dimensions HxWxD	mm	90x50x80	110x50x80	160x50x80	110x90x80	160x90x80	220x90x80
Weight	kg	0.25	0.30	0.45	0.50	0.85	1.1
Conformity	-	CE					

*at 20°C (68°F) ambient temperature

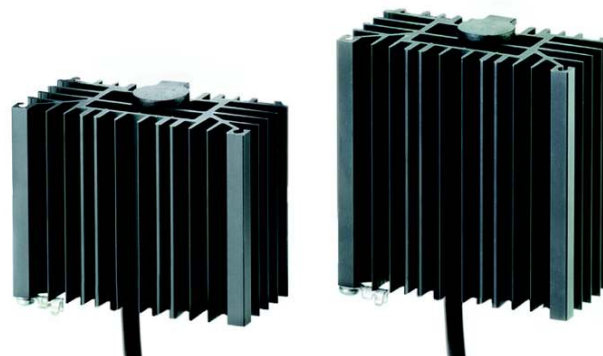
Accessories

Thermostat NC 0-60°C	THR02
Double thermostat NC 0-60°C NO 0-60°C	THR22
Hygrothermostat 0-60°C 30-90%RH	ETUH22



SHT W

PTC HEATERS, WIRE CONNECTION

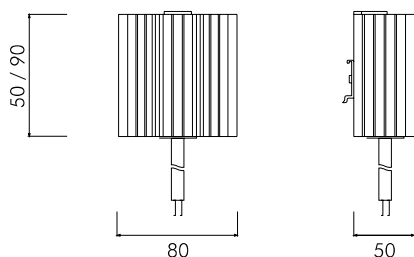


Features	Unit	SHT15W	SHT25W	SHT50W
Heating Capacity*	W	15	25	50
Power supply	V	110-250V AC or DC		
Max. current	A	2A	2A	2A
Heating element type	-	PTC resistor, self regulating		
Electrical connections	-	Silicon cable, 2x0.5 mm ² , length 400 mm		
Protection class IEC	-	Class II		
Protection degree EN60529	-	IP20		
Operating temperature	°C (°F)	-45/+70 (-49/+158)		
Storage temperature	°C (°F)	-45/+70 (-49/+158)		
Radiator	-	Extruded aluminium profile, anodized		
Mounting	-	Clip for mounting on DIN rail 35 mm EN50022		
Installation position	-	Best efficiency in vertical position		
Dimensions HxWxD	mm	50x50x80	60x50x80	80x50x80
Cable length	mm	400	400	400
Weight	kg	0.20	0.24	0.29
Conformity	-	CE		

*at 20°C (68°F) ambient temperature

Accessories

Thermostat NC 0-60°C	THR02
Double thermostat NC 0-60°C NO 0-60°	THRV22
Hygrothermostat 0-60°C 30-90%RH	ETUH22



FSHT

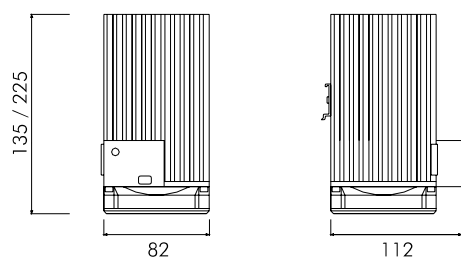
FAN ASSISTED, RESISTOR HEATERS



Features	Unit	FSHT250	FSHT251	FSHT500	FSHT501	FSHT750	FSHT751
Heating Capacity	W	250	250	500	500	750	750
Power supply	V/Hz	230/50-60	115/50-60	230/50-60	115/50-60	230/50-60	115/50-60
Max. current	A	1.2	2.4	2.4	4.8	3.6	7.2
Heating element type	-	Resistor					
Thermal protection	-	Thermal cut out fuse in case of fan failure					
Radiator	-	Extruded aluminium profile, anodized					
Axial fan	-	Ball bearing, service life 50.000 hrs at 25°C (77°F)					
		air flow rate 35 m³/h, free flow				air flow rate 44 m³/h, free flow	
Signalling		Green LED power ON					
Electrical connections	-	3 screw terminals for stranded or rigid wire 2.5 mm²					
Protection class IEC	-	Class I, earthed					
Protection degree EN60529	-	IP20					
Operating temperature	°C (°F)	-25/+70 (-13/+158)					
Storage temperature	°C (°F)	-25/+70 (-13/+158)					
Mounting	-	Clip for mounting on DIN rail 35 mm EN50022					
Installation position	-	Best performance with vertical installation					
Dimensions HxWxD	mm	135x112x82	135x112x82	165x112x82	165x112x82	225x112x82	225x112x82
Weight (with packaging)	kg	0.88(0.94)	0.88(0.94)	0.97(1.04)	0.97(1.04)	1.35(1.42)	1.35(1.42)
Conformity	-	CE					

Accessories

Thermostat NC 0-60°C	THR02
Double thermostat NC 0-60°C NO 0-60°	THR22
Termoigrostat 0-60°C 30-90%RH	ETUH22



FPH

FAN ASSISTED PTC HEATERS



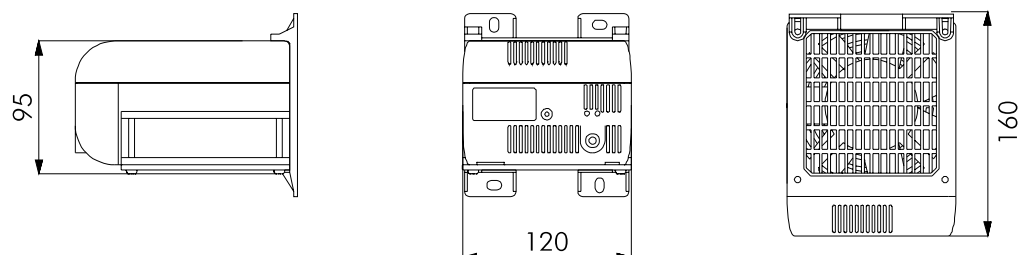
Features	Unit	FPH1200	FPH1201	FPH1500	FPH1501	FPH2000	FPH2001
Heating Capacity	W	1200	1200	1500	1500	2000	2000
Power supply	V/Hz	230/50-60	115/50-60	230/50-60	115/50-60	230/50-60	115/50-60
Heating element type	-	PTC resistor, self regulating					
Thermal protection	-	Thermal cut out in case of fan failure (auto-reset for 100,000 cycles)					
Casing	-	Plastic according to UL94 V-0, black					
Axial fan	-	Ball bearing, service life 50.000 hrs at 25°C (77°F), air flow rate 160 m3/h, free flow					
Control operation	-	optional					
Electrical connections	-	3 screw terminals for stranded or rigid wire 2.5 mm2					
Alarm output	-	optional 2 screw terminals for alarm signal 5-30V DC / 0,5A					
Protection class IEC	-	Class I, earthed					
Protection degree EN60529	-	IP20					
Operating temperature	°C (°F)	-40/70 (-13/158)					
Storage temperature	°C (°F)	-40/70 (-13/158)					
Mounting	-	Screw fixing (M4)					
Installation position	-	Best performance with horizontal installation					
Dimensions HxWxD	mm	95x160x120					
Weight (with packaging)	kg	1.20(1.27)					
Conformity	-	CE					

Versions

FPH xxxx .00	without bimetallic thermostat
FPH xxxx .01	with bimetallic thermostat integrated
FPH xxxx .02	with electronic board integrated

Functions of electronic board

1. electronic temperature control
2. green LED on for proper operation, red LED on for malfunction
3. 2 screw terminals for alarm signal 5-30V DC / 0,5A



MHT

COMPACT PTC HEATERS

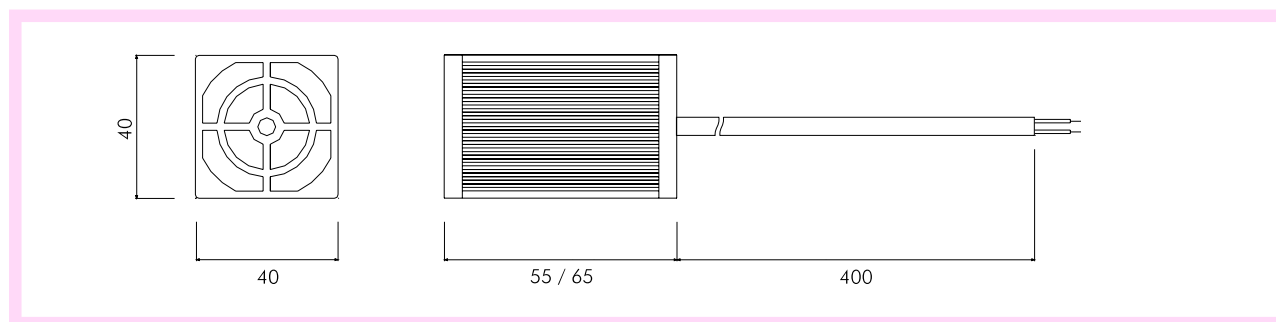


Features	Unit	MHT5	MHT15	MHT30
Heating Capacity*	W	5	15	30
Power supply	V	110-250V AC or DC		
Max. current	A	1.5	2A	2A
Heating element type	-	PTC resistor, self regulating		
Electrical connections	-	Silicon cable, 2x0,5 mm ² , length 400 mm		
Protection class IEC	-	Class II		
Protection degree EN60529	-	IP20		
Operating temperature	°C (°F)	-45/+70 (-49/+158)		
Storage temperature	°C (°F)	-45/+70 (-49/+158)		
Radiator	-	Extruded aluminium profile, anodized		
Mounting	-	Clip for mounting on DIN rail 35 mm EN50022		
Installation position	-	Best efficiency in vertical position		
Dimensions HxWxD	mm	55x40x40	55x40x40	65x40x40
Cable length	mm	400	400	400
Weight (with packaging)	kg	0.11(0.12)	0.11(0.12)	0.13(0.14)
Conformity	-	CE		

*at 20°C (68°F) ambient temperature

Accessories

Thermostat NC 0-60°C	THR02
Double thermostat NC 0-60°C NO 0-60°	THRV22
Hygrothermostat 0-60°C 30-90%RH	ETUH22



FMHT

FAN ASSISTED, COMPACT PTC HEATERS



Features	Unit	FMHT75	FMHT100	FMHT150	FMHT230	FMHT300
Heating Capacity*	W	75	100	150	230	300
Power supply	V/Hz	Heater 110-250V AC/DC - Fan 24V AC/DC				
Max. current	A	4	4	6	6	8
Heating element type	-	PTC resistor, self regulating				
Radiator	-	Extruded aluminium profile, anodized				
Axial fan	-	Ball bearing, service life 50.000 hrs at 25°C (77°F), air flow rate 11 m³/h, free flow				
		air flow rate 11 m³/h, free flow				
						air flow rate 33 m³/h, free flow
Electrical connections	-	Silicon cable, 4x0.5 mm², length 400 mm				
Protection class IEC	-	Class I				
Protection degree EN60529	-	IP20				
Operating temperature	°C (°F)	-20/+70 (-4/+158)				
Storage temperature	°C (°F)	-25/+70 (-13/+158)				
Mounting	-	Clip for mounting on DIN rail 35 mm EN50022				
Installation position	-	Best performance in vertical installation				
Dimensions HxWxD	mm	97x40x40	97x40x40	132x40x40	142x40x40	157x40x40
Cable length	mm	400	400	400	400	400
Weight (with packaging)	kg	0.20(0.21)	0.20(0.21)	0.26(0.28)	0.28(0.30)	0.40(0.42)
Conformity	-	CE				

*at 20°C (68°F) ambient temperature

Accessories

Thermostat NC 0-60°C	THR02
Double thermostat NC 0-60°C NO 0-60°	THR22
Hygrothermostat 0-60°C 30-90%RH	ETUH22

