

## 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

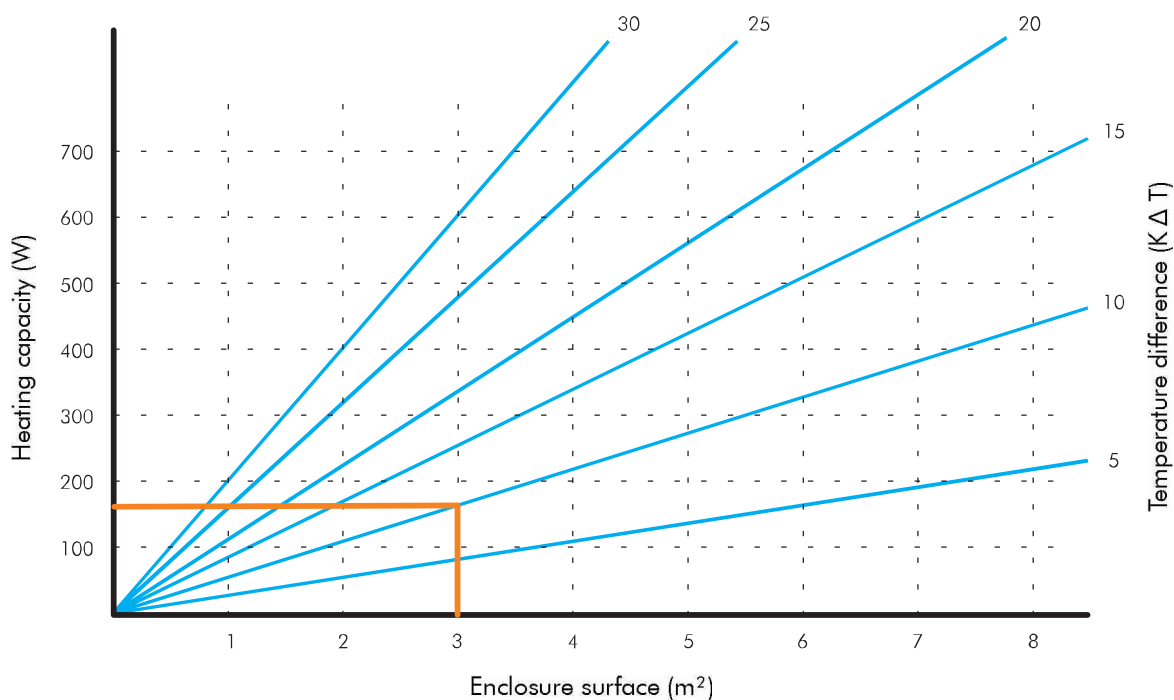
Alfa Electric offers a wide range of solutions, all for DIN rail mounting:

- 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.

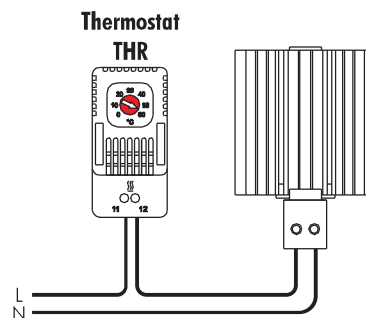
**Anticondensation heaters selection diagram**



### Example:

Enclosure surface 3m<sup>2</sup>  
 Temperature difference 10K  
 Heating capacity required 170W

Possible heater solutions: n. 2 SHT100  
 n. 1 FSHT250  
 n. 1 FMHT230





### SHT

PTC HEATERS, TERMINAL CONNECTION

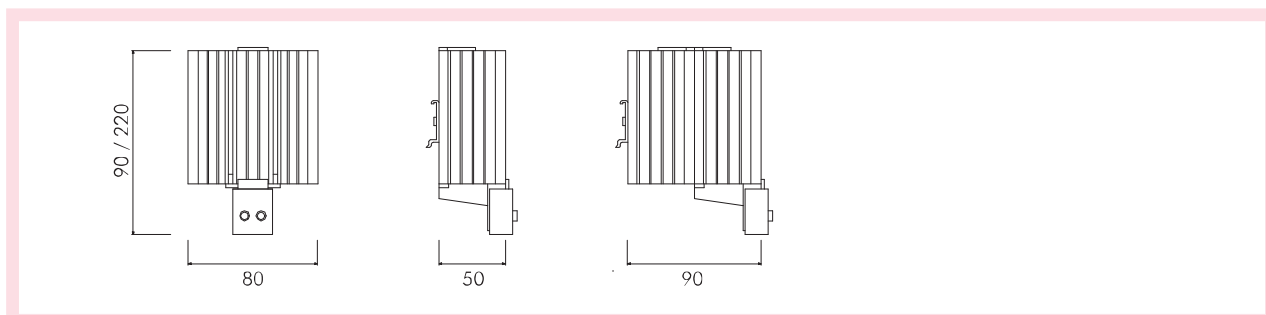


Features	Unit	SHT25	SHT50	SHT75	SHT100	SHT125	SHT150
Heating Capacity*	W	25	50	75	100	125	150
Power supply	V	110-250V AC or DC					
Max. current	A	2A	2A	4A	4A	6A	6A
Heating element type	-	PTC resistor, self regulating					
Electrical connections	-	2 screw terminals for stranded or rigid wire 2.5 mm <sup>2</sup>					
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°	THR22
Hygrothermostat 0-60°C 30-90%RH	ETUH22





### SHT W

PTC HEATERS, WIRE CONNECTION

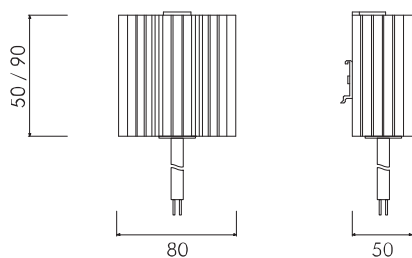


Features	Unit	SHT15W	SHT25W	SHT50W
Heating Capacity*	W	15	25	50
Power supply	V	110-250V AC or DC		
Max. current	A	2A	2A	2A
Heating element type	-	PTC resistor, self regulating		
Electrical connections	-	Silicon cable, 2x0.5 mm <sup>2</sup> , length 400 mm		
Protection class IEC	-	Class II		
Protection 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°	THR22
Hygrothermostat 0-60°C 30-90%RH	ETUH22





### FSHT

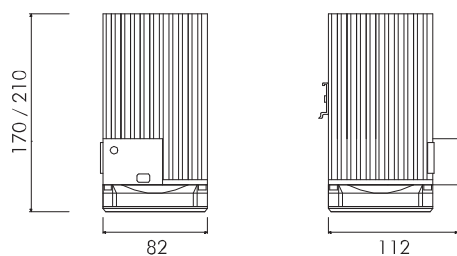
FAN ASSISTED, RESISTOR HEATERS



Features	Unit	FSHT250	FSHT251	FSHT500	FSHT501
Heating Capacity	W	250	250	500	500
Power supply	V/Hz	230/50-60	115/50-60	230/50-60	115/50-60
Max. current	A	1.2	2.4	2.4	4.8
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			
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	170x112x82	170x112x82	210x112x82	210x112x82
Weight	kg	1.4	1.4	1.6	1.6
Conformity	-	CE			

#### 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





### MHT COMPACT PTC HEATERS

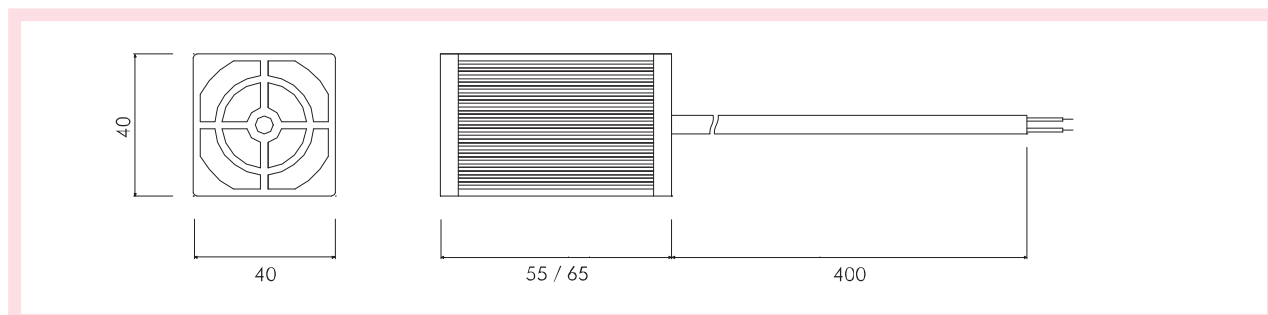


Features	Unit	MHT5	MHT15	MHT30
Heating Capacity*	W	5	15	30
Power supply	V	110-250V AC or DC		
Max. current	A	1.5	2A	2A
Heating element type	-	PTC resistor, self regulating		
Electrical connections	-	Silicon cable, 2x0,5 mm <sup>2</sup> , length 400 mm		
Protection class IEC	-	Class II		
Protection degree 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	kg	0.110	0.110	0.130
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





### FMHT

FAN ASSISTED, COMPACT PTC HEATERS



Features	Unit	FMHT75	FMHT100	FMHT150	FMHT230
Heating Capacity*	W	75	100	150	230
Power supply	V/Hz	Heater 110-250V AC/DC - Fan 24V AC/DC			
Max. current	A	4A	4A	6A	6A
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 m <sup>3</sup> /h, free flow			
Electrical connections	-	Silicon cable, 4x0.5 mm <sup>2</sup> , 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
Cable length	mm	400	400	400	400
Weight	kg	0.2	0.2	0.26	0.28
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

