

PTC FAN HEATER

CSF 028 | 250 W, 400 W



CSF 028 with DIN clip



CSF 028 with screw mount tabs

- > Compact size
- > Integrated pre-set thermostat
- > Quiet operation
- > Heating power adjusts to ambient temperature
- > DIN rail or screw tab mount available

The CSF 028 fan heater prevents formation of condensation and provides evenly distributed interior air temperature in enclosures. The touch-safe plastic housing and the small size makes it ideal for use in enclosures with a high packing density. The heater is equipped with a fixed set point thermostat and is easily wired via external pressure clamps. Two different mounting options are available – DIN rail or screw tabs. The robust screw tab mounting is particularly suitable for applications with high vibration.



TECHNICAL DATA

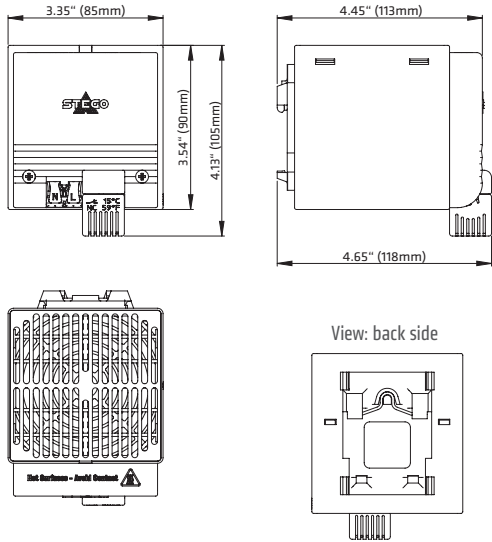
Heating element	PTC resistor, temperature limiting
Overheat protection	built-in temperature limiter
Axial fan, ball bearing	service life 40,000 h at 104 °F (+40 °C)
Axial fan, free blowing	32 cfm (54 m ³ /h) @ AC 120 V 26 cfm (45 m ³ /h) @ AC 230 V
Connection	2-pole dual pressure clamp for solid wire AWG 14 max. (2.5mm ²), stranded wire (with wire end ferrule) AWG 16 max. (1.5 mm ²)
Housing	plastic, UL 94V-0, black
Mounting	clip for 35 mm DIN rail, EN 60715 or screw mount (Ø 5.5 mm), clamping torque 2 Nm max., washers must be used
Mounting position	vertical airflow (air outlet up)
Dimensions	models with DIN clip: 4.13 x 3.35 x 4.65" (105 x 85 x 118 mm), models w/ screw tabs: 4.13 x 4.53 x 4.25" (105 x 115 x 108 mm)
Weight	17.6 oz. (500 g)
Operating / Storage temperature	-40 to +158 °F (-40 to +70 °C) / -49 to +158 °F (-45 to +70 °C)
Operating / Storage	max. 90 % RH (non-condensing)
Protection class / Protection type	II (double insulated) / IP20

Part No. DIN mount	Part No. screw tab mount	Operating voltage	Heating capacity ¹	Inrush current max.	Recommended pre-fuse T (time-delay)	Switch-off temperature ²	Switch-on temperature ²	Approvals		
02821.9-06	02821.9-08	AC 120 V, 50/60 Hz	250 W	6.0 A	10.0 A	59 °F (15 °C)	41 °F (5 °C)	UL File No. E234324	-	EAC
02821.9-09	02821.9-11	AC 120 V, 50/60 Hz	250 W	6.0 A	10.0 A	77 °F (25 °C)	59 °F (15 °C)	UL File No. E234324	-	EAC
02820.9-06	02820.9-08	AC 120 V, 50/60 Hz	400 W	9.0 A	10.0 A	59 °F (15 °C)	41 °F (5 °C)	UL File No. E234324	-	EAC
02820.9-09	02820.9-11	AC 120 V, 50/60 Hz	400 W	9.0 A	10.0 A	77 °F (25 °C)	59 °F (15 °C)	UL File No. E234324	-	EAC
02821.0-06	02821.0-08	AC 230 V, 50/60 Hz	250 W	9.0 A	10.0 A	59 °F (15 °C)	41 °F (5 °C)	UL	VDE	EAC
02821.0-09	02821.0-11	AC 230 V, 50/60 Hz	250 W	9.0 A	10.0 A	77 °F (25 °C)	59 °F (15 °C)	UL	VDE	EAC
02820.0-06	02820.0-08	AC 230 V, 50/60 Hz	400 W	15.0 A	16.0 A	59 °F (15 °C)	41 °F (5 °C)	UL	VDE	EAC
02820.0-09	02820.0-11	AC 230 V, 50/60 Hz	400 W	15.0 A	16.0 A	77 °F (25 °C)	59 °F (15 °C)	UL	VDE	EAC

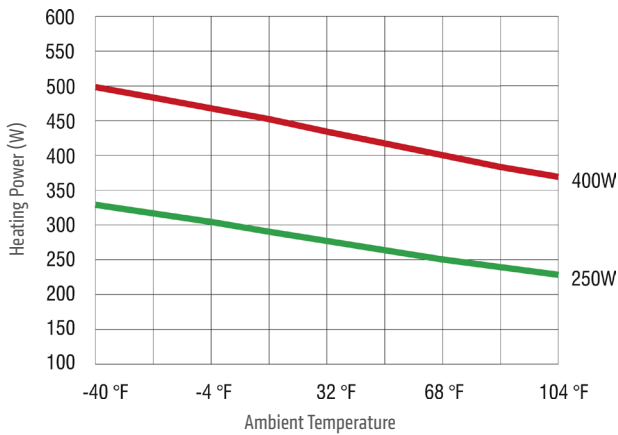
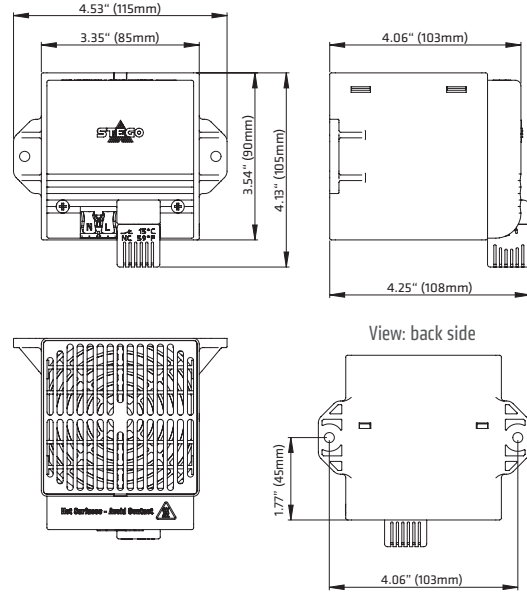
¹ at 68 °F (20 °C) ambient temperature; ² tolerance of ±5 K
Note: Other Switch-off and Switch-on temperatures on request.

DIMENSIONED DRAWINGS

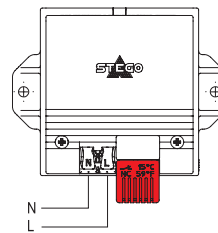
DIN RAIL MOUNT



SCREW TAB MOUNT



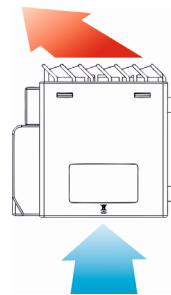
Wiring example
Fan heater CSF 028



ACCESSORIES

Air guide for improved heat distribution

The air guide is an accessory part for use with the fan heater CSF 028. It can easily be clipped onto the protective grill of the fan heater without use of any tools, and diverts the exiting warm air by 45°. This results in an overall improved heat distribution within an enclosure or cabinet. The temperature above the protective grill is reduced by up to 68 °F/20 °C (measured approx. 3.9"/100 mm above protective grille) and may make the use of custom heat ducts obsolete.



Air guide Part No. 252017



Fan heater with air guide

Part No.	Dimensions ²	Plastic	1 Packing unit	Weight (approx.)
252017	3.3 x 3.3 x 0.5" (85 x 85 x 12 mm)	UL 94V-0, black	1 piece	1.2 oz. (35 g)

² Dimensions when mounted on fan heater.