

COMPACT SEMICONDUCTOR FAN HEATER

CSF 028 | 250 W, 400 W



CSF 028 with clip fixing



CSF 028 with screw flange fixing

- > Small, compact design
- > Integrated pre-set thermostat
- > Dynamic heating up
- > Touch-safe
- > Quick connection
- > Clip or screw flange fixing

The compact fan heater prevents formation of condensation and provides an evenly distributed interior air temperature in enclosures with electric/electronic components. The touch-safe plastic housing and the small dimensions makes it ideal for use in enclosures with high packing density. The CSF 028 is equipped with a preset thermostat. It is connected via external clamps. The fan heater is available with two different mounting systems – either mounting by screw flange or by clip. The robust screw flange fixing is particularly suitable for applications with high vibration.



TECHNICAL DATA

Heating element	PTC resistor – temperature limiting
Surface temperature	250 W: max. +50 °C (+122 °F), 400 W: max. +65 °C (+149 °F) each except upper protective grille at +20 °C (+68 °F) ambient temperature
Temperature safety cut-out	to protect against overheating in case of fan failure, automatic reset
Axial fan, ball bearing	air flow, free flow CSF 028: 45 m³/h (AC 230 V), 54 m³/h (AC 120 V) service life 40,000 h at +40 °C (+104 °F)
Connection	2-pole dual pressure clamp for rigid wire 2.5 mm², stranded wire (with wire end ferrule) 1.5 mm²
Casing	plastic according to UL94 V-0, black
Mounting	clip for 35 mm DIN rail, EN 60715 or screw fixing (Ø 5.5 mm), lamping torque 2 Nm max., washers have to be used
Fitting position	vertical airflow (air outlet up)
Dimensions	models with clip fixing: 105 x 85 x 118 mm, models with screw flange fixing: 105 x 115 x 108 mm
Weight	0.5 kg
Operating/Storage temperature	-40 to +70 °C (-40 to +158 °F)/-45 to +70 °C (-49 to +158 °F)
Operating/Storage humidity	max. 90 % RH (non-condensing)
Protection type/Protection class	IP20 / II (double insulated)
Approvals	VDE, UL File No. E150057, EAC

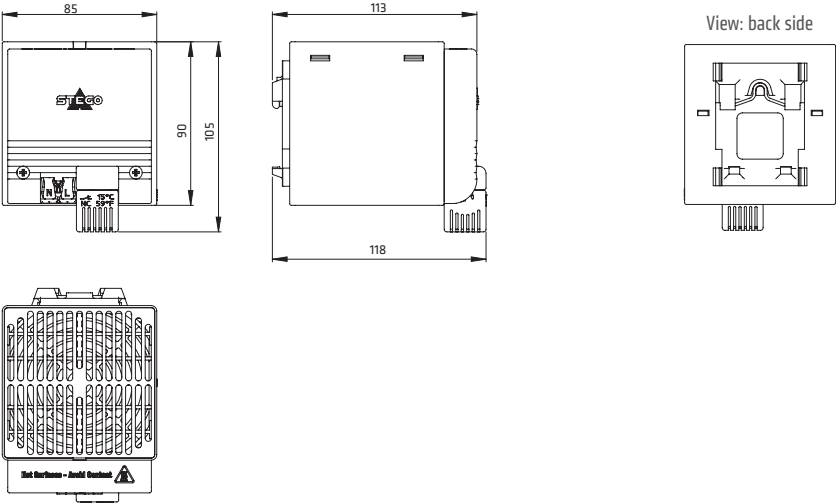
Art. No. clip fixing	Art. No. screw flange fixing	Operating voltage	Heating capacity ¹	Inrush current max.	Recommended pre-fuse T (time-delay)	Switch-off temperature ²	Switch-on temperature ²
02821.0-06	02821.0-08	AC 230 V, 50/60 Hz	250 W	9.0 A	10.0 A	+15 °C (+59 °F)	+5 °C (+41 °F)
02821.0-09	02821.0-11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

¹ at +20 °C (+68 °F) ambient temperature; ² tolerance of ±5 K

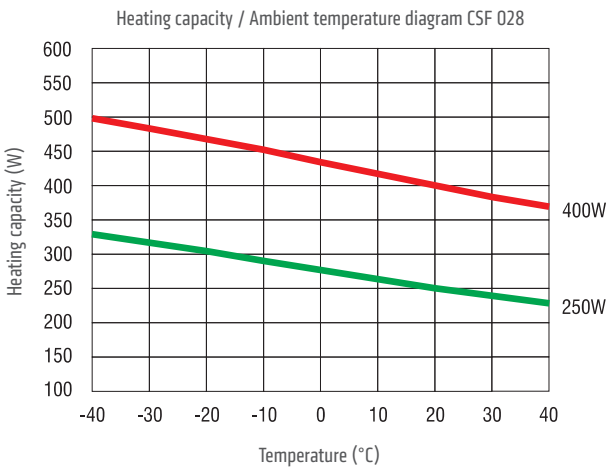
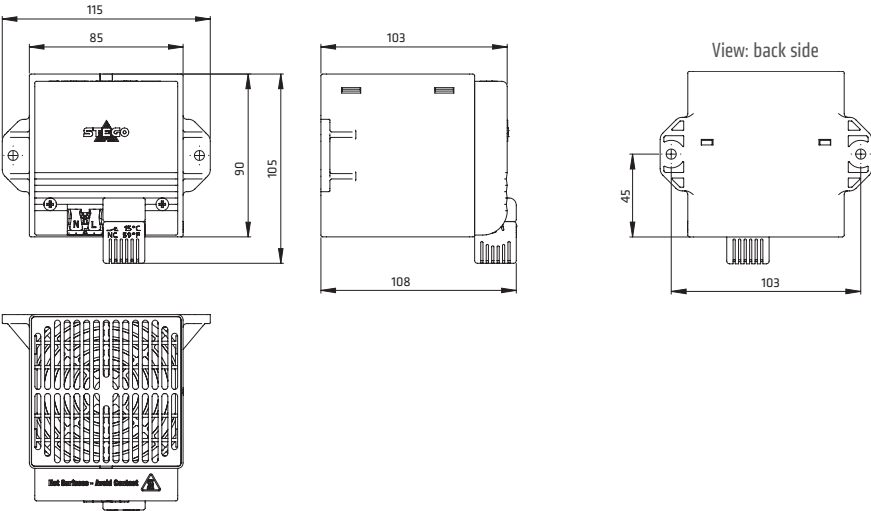
Note: Other switch-off and switch-on temperatures on request.

TECHNICAL DRAWINGS

CLIP FIXING



SCREW FLANGE FIXING



Example of connection
Fan heater CSF 028

