

# 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

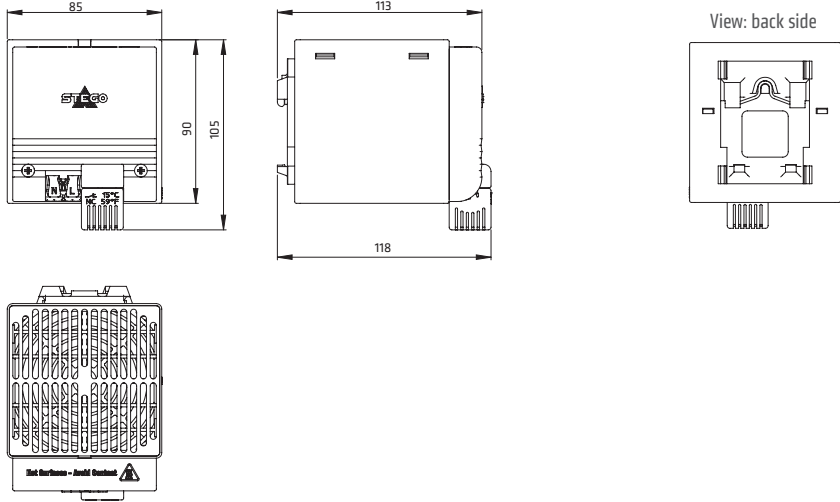
|                                  |  |
|----------------------------------|--|
| Heating element                  | PTC resistor - temperature limiting  |
| Surface temperature              | 250W: max. +50°C (+122°F), 400W: max. +65°C (+149°F) each except upper protective grille at +20°C (+68°F) ambient temperature        |
| Temperature safety cut-out       | to protect against overheating in case of fan failure, automatic reset   |
| Axial fan, ball bearing          | air flow, free flow<br>CSF 028: 45m <sup>3</sup> /h (230VAC), 54m <sup>3</sup> /h (120VAC)<br>service life 40,000h at +40°C (+104°F) |
| Connection                       | 2-pole dual pressure clamp for rigid wire 2.5mm <sup>2</sup> , stranded wire (with wire end ferrule) 1.5 mm <sup>2</sup>             |
| Casing                           | plastic according to UL94 V-0, black   |
| Mounting                         | clip for 35mm DIN rail, EN 60715 or screw fixing (Ø 5.5mm), lamping torque 2Nm max., washers have to be used                         |
| Fitting position                 | vertical airflow (air outlet up), horizontal airflow   |
| Dimensions                       | models with clip fixing: 105 x 85 x 118mm, models with screw flange fixing: 105 x 115 x 108mm  |
| Weight                           | 0.5kg  |
| 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                        | intended: UL, VDE, GOST TR   |

| Art. No. clip fixing | Art. No. screw flange fixing | Operating voltage | Heating capacity <sup>1</sup> | Inrush current max. | Pre-fuse T (time-delay) | Switch-off temperature <sup>2</sup> | Switch-on temperature <sup>2</sup> |
|----------------------|------------------------------|-------------------|-------------------------------|---------------------|-------------------------|-------------------------------------|------------------------------------|
| 02821.0-06           | 02821.0-08                   | 230VAC, 50/60Hz   | 250W                          | 9A                  | 10A                     | +15°C (+59°F)                       | +5°C (+41°F)                       |
| 02821.0-09           | 02821.0-11                   | 230VAC, 50/60Hz   | 250W                          | 9A                  | 10A                     | +25°C (+77°F)                       | +15°C (+59°F)                      |
| 02820.0-06           | 02820.0-08                   | 230VAC, 50/60Hz   | 400W                          | 15A                 | 16A                     | +15°C (+59°F)                       | +5°C (+41°F)                       |
| 02820.0-09           | 02820.0-11                   | 230VAC, 50/60Hz   | 400W                          | 15A                 | 16A                     | +25°C (+77°F)                       | +15°C (+59°F)                      |
| 02821.9-06           | 02821.9-08                   | 120VAC, 50/60Hz   | 250W                          | 6A                  | 10A                     | +15°C (+59°F)                       | +5°C (+41°F)                       |
| 02821.9-09           | 02821.9-11                   | 120VAC, 50/60Hz   | 250W                          | 6A                  | 10A                     | +25°C (+77°F)                       | +15°C (+59°F)                      |
| 02820.9-06           | 02820.9-08                   | 120VAC, 50/60Hz   | 400W                          | 9A                  | 10A                     | +15°C (+59°F)                       | +5°C (+41°F)                       |
| 02820.9-09           | 02820.9-11                   | 120VAC, 50/60Hz   | 400W                          | 9A                  | 10A                     | +25°C (+77°F)                       | +15°C (+59°F)                      |

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

TECHNICAL DRAWINGS

CLIP FIXING



SCREW FLANGE FIXING

